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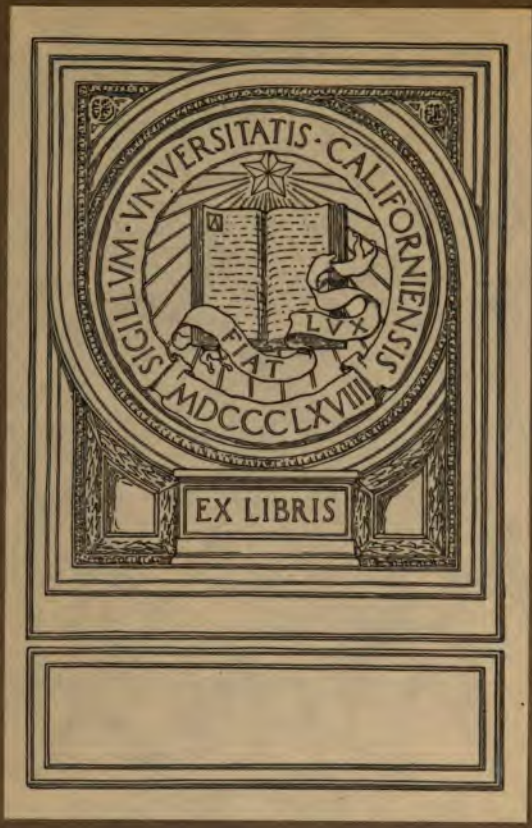
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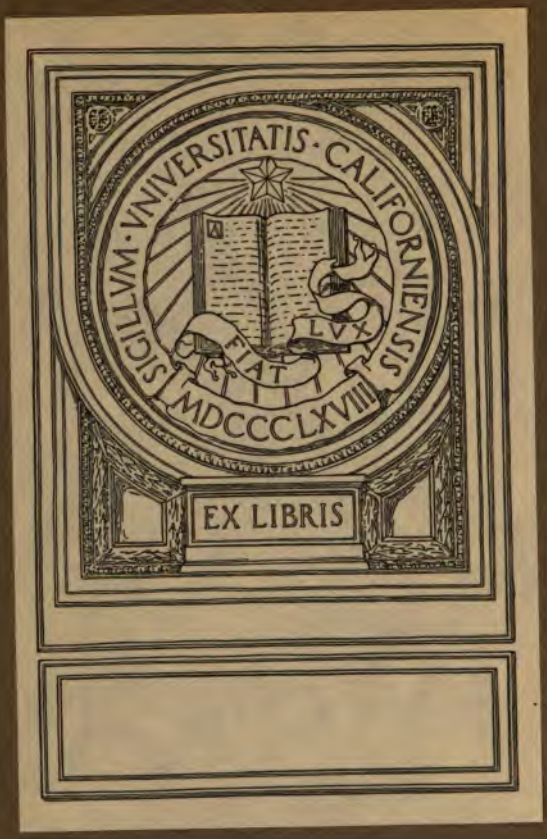
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VALUE

AND

DISTRIBUTION

AN

HISTORICAL, CRITICAL, AND CONSTRUCTIVE STUDY

IN

ECONOMIC THEORY

ADAPTED FOR ADVANCED AND POST-GRADUATE WORK

BY

CHARLES WILLIAM MACFARLANE, PH.D.

SECOND EDITION

PHILADELPHIA

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ELECTROTYPED AND PRINTED BY J. B. LIPPINCOTT COMPANY, PHILADELPHIA, U.S.A.

THIS BOOK IS GRATEFULLY DEDICATED
TO MY FRIEND AND FORMER PRECEPTOR

DR. EUGEN VON PHILIPPOVICH

PROFESSOR OF POLITICAL ECONOMY
IN THE UNIVERSITY OF VIENNA

WHO, WHILE IN NO WAY RESPONSIBLE
FOR THE OPINIONS HEREIN EXPRESSED,
MAY YET FIND IN THEM SOME REFLEC-
TION OF HIS OWN CATHOLIC VIEW OF
ECONOMIC PHENOMENA

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PREFACE.

THE last quarter of the nineteenth century has witnessed more than one noteworthy advance in economic theory. Some of this work has been embodied in permanent form, as in the publications of the Austrian school of economists; much of it, however, is scattered through various magazines and journals, and its importance is unrecognized because no effort has as yet been made to bring it together as a coherent whole. One of the purposes of the present volume is to give more permanent form to this scattered work and to bring it, as well as that of the Austrian economists, into some sort of co-relation with the work of the so-called orthodox school of economists. Again, it will be found that in the endeavor to give coherence to the work of previous writers certain concepts or theories are developed that have not been clearly stated elsewhere, —concepts which more or less seriously modify the hitherto accepted views of value and distribution.

The fact from which all studies of distribution must start is the *price* of commodities, and what we have to determine is how this price is divided among the several parties to the transaction. From this it follows that any adequate study of distribution

must be prefaced by an examination of the phenomena of value and price. In keeping with this I have devoted the first part of the present volume to an attempt to answer the vexed question, What do we mean by value and price?

In the discussion of the problem of distribution, the question of the equity of the distribution has been consciously and purposely avoided. The importance of this phase of the subject cannot well be exaggerated; but the laws according to which the social product is distributed should first be clearly defined before we attempt to determine whether or not this distribution is equitable. Nothing is gained either by confounding the two problems or by inverting the order of the inquiry. In the present volume I shall strictly confine myself to the first of these problems, or to a purely theoretic study of the laws under which the several shares in distribution are determined.

In the earlier days of the present investigation I regarded it strictly as a monograph, and addressed myself to those who are familiar with the whole range of economic theory. As the work progressed, however, it seemed that by some modifications and additions it might be made available for the ordinary advanced student or for those who had only been over the ground covered by the usual text-book. With this larger audience in mind, I was persuaded to adopt the topical form for the presentation of the subject. The shifting from one audience to

another during the progress of the work has resulted in an unevenness which could only be eliminated by a careful rewriting of the entire book. The pressure of other interests renders this practically impossible.

In the desire to secure a clear and coherent view of a rather wide range of economic phenomena, I have been compelled to ignore many details whose discussion, though interesting and important, might confound the reader, or at least obscure his view of the main lines of the argument. Again, it may be that a greater wealth of illustrations would have helped rather than hindered the argument. If so, it is an omission which the intelligent teacher can readily supply.

In conclusion, I have to thank Professor F. W. Speirs, of the Philadelphia Manual Training School; Professor H. R. Seager, of the University of Pennsylvania, and Professor John L. Stewart, of Lehigh University, for a careful reading of the manuscript and for valuable criticisms and suggestions. Again, I have especially to thank Professor H. C. Whitaker, of the Philadelphia Manual Training School, who spent several weeks with me in a revision of the original manuscript, thus enabling me to see all parts of the argument through the eyes of another. It was at his suggestion that the topical form was adopted. This has undoubtedly added much to the clearness of the entire argument.

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INTRODUCTION.

It has frequently been remarked that there is a necessary correspondence between the economic theories and the economic phenomena of a time and people. The economist, like every other purveyor of truth, is, to a greater or less extent, "cribbed, cabined, and confined" by the facts of his immediate environment. Strive as he may to forecast the future, his speculations seldom far outrun the progress of material phenomena. Indeed, there is always a grave danger that his theories will crystallize in such fixed and definite forms that they will fail to respond to the never-resting progress of the events they are supposed to explain. Nowhere does this find more apt illustration than in the utter lack of correspondence between theory and phenomena in the third quarter of the nineteenth century. Again, in the almost revolutionary change in the whole status of the theories of value and distribution which the last quarter of the century has witnessed, we have a belated attempt to bring our theories into some sort of harmony with the existing facts.

The most cursory examination of the economic conditions of the first and last quarters of the nineteenth century will reveal a sharp contrast in the

tendency of the phenomena of the two periods. For example, in England, in the first quarter, we find all restrictions of trade giving way before the industrial revolution that was then at its height. The introduction of steam and the substitution of the factory for the home system of industry had well-nigh completed the destruction of the old craft and guild system. The growing power of the new middle class that had arisen with the development of the factory system was now asserting itself. It insisted upon the abolition of the corn laws and, secure in its established industries, was willing to accept a gradual reduction of import duties. In a word, the English economists of the early part of the century were confronted by the phenomena of the rapid breaking down of all those trade restrictions which time and custom had rendered sacred. It is therefore not strange that they should have concluded that the day was not far distant when the ideal of free competition would be realized in the actual facts of industrial life. Indeed, such progress had been made in this direction by the middle of the century that J. S. Mill writes, "scarcity values are rather conceivable than actually existing."

The last quarter of the century has witnessed a rude awakening from this pleasant dream; the ten-thousand-acre farms, the organization of labor in large and compact masses, the aggregation of great masses of capital into an even more complete solidarity,—all evidence the utter collapse of that ideal

of free competition which Mill thought was about to be realized. As another has well said, "Just when the disappearance of the last vestige of a volitional restriction of competition was looked for, and the universal application of the 'rule of the market' was confidently expected, we see a wide-spread revival of economic methods and agencies over which 'The Wealth of Nations' was read as a funeral service." *

This rise of the modern system of labor organizations, trusts, etc., has compelled a radical change in the attitude of economists towards the theories of value and distribution. They no longer hold that scarcity values are "rather conceivable than actually existing." Indeed, Mill's contention might well be reversed, since scarcity goods are the rule rather than the exception. It is the recognition of this fact that has constrained many economists to abandon the Cost Theory of Value and to substitute for it the Marginal Utility Theory of Value.

It is, however, strange that the most strenuous advocates of the Marginal Utility Theory of Value have failed to see that this recognition of the general prevalence of scarcity values must compel the readjustment of our theory of distribution. The old scheme, which divided the social surplus into rent, wages, and interest, was based on the assumption of free competition. If this assumption does not cor-

* See The Modern Distributive Process, by Clark and Giddings, p. 20.

respond with the facts,—if scarcity values do prevail,—then the surplus due to such scarcity value must receive recognition and name in our scheme of distribution. And yet modern economists have, for the most part, either followed Ricardo and confounded this surplus with interest, or have followed Mill in the passage just quoted and confounded it with rent.

Again, economists, especially those of the Austrian school, have insisted so strongly upon the general prevalence of scarcity values among *concrete* commodities that they have failed to see that in the problem of interest we are dealing entirely with normal value, or with that phenomenon of value in which marginal utility and marginal disutility coincide. Failing to see this, Böhm-Bawerk, formally and in the most uncompromising way, repudiates abstinence as having any part in the determination of interest.

Possibly the most important contribution of American economists has been to the theory of wages; and yet, though establishing almost every point necessary to the construction of an Exchange Theory of Wages corresponding in all respects to Böhm-Bawerk's "Exchange Theory of Interest," they have failed to recognize the possibility of such a theory of wages.

There is one other change in the drift of economic thought which must also be examined with some care. This is the growing tendency to recognize the

fact that rent is not peculiar to land, but is a general function common to all the factors of production. In German economics this general character of the rent function was recognized as early as 1807, but in English literature it was not until the last quarter of the century that the movement in this direction became at all general. The reason for this delayed recognition by English economists is found in the accent thrown upon the rent of land by the English corn law agitation.

In sketching the history of economic theory, however, one must not only keep in mind its correspondence with economic phenomena, but must be persistent in recognizing the continuity in its development. The Abstinence, Productivity, and Use Theories of Interest, for instance, cannot be dismissed as so many vain attempts to solve a difficult problem, but instead they must be seen as parts of a progressive movement in thought which resulted in the Exchange or Normal Value Theory of Interest. In other words, the recognition of this continuity is as essential to the right understanding of the history of economic theory as to the right understanding of any other phase of human endeavor. If this continuity in thought is clearly developed in the historic part of the present study the writer will have attained at least some measure of success.

PART I.

VALUE.

VALUE AND DISTRIBUTION.

CHAPTER I.

THE COST THEORY OF VALUE.

A RECENT writer has well said, "There are certain unsettled questions in economic theory that have been handed down as a sort of legacy from one generation to another;" questions that "return again and again, like troubled spirits doomed restlessly to wander until the hour of their deliverance shall appear." Among these is the question, "What is the ultimate standard of value?" *

Any attempt to answer this question is confronted by certain facts which are usually referred to as the paradoxes of value. These are as follows: 1. The most useful things, like air and water, are usually without value. 2. Useful things, like iron and copper, are not valued as highly as less useful things, like gold or diamonds. 3. By decreasing the supply of a commodity, and consequently the total utility to be obtained from it, the total value may be increased.

* Böhm-Bawerk, Annals of American Academy, September, 1894.

This was done by the Dutch East India Company when it destroyed a portion of the produce of its plantations in order to enhance the price of the balance. We have now to inquire what explanation the cost theory can offer for these paradoxes of value.

I. THE EARLIER COST THEORY.

It was not long before men perceived that in most instances there is a correspondence between the value of a commodity and its cost of production; nor were they long in recognizing the further fact that this cost could be made to explain at least two of the above paradoxes of value.

1. Paradoxes of Value explained by the Cost Theory.—With regard to the first parodox the solution is evident. Such things as air and water have no value because they have no cost.

The solution of the second paradox is almost as patent: Gold is more valuable than iron because on the whole it costs more than iron.

In the case of the third paradox the solution is not so evident. But then it might be urged that a wilful destruction of commodities is of rare occurrence, that the limitation of supply which is here affected in an arbitrary way is usually determined by the cost of production. In other words, we here have the exception that proves the rule.

2. Free Goods eliminated from Economic Consideration.—Tested by the facility with which these complications were resolved, the advocates of the cost

theory certainly had a strong case. Yet from the very first they hesitated to accept the logical results of their own reasoning. For if cost determines value, then things like air and water, which have no cost, can have no value. This, however, they were not prepared to admit, but declared that while such goods had "value in use" they had no "exchange value." But having thus established the distinction between these two forms of value they proceed to discuss "value in exchange," and do not trouble themselves any further about "value in use." It is necessary to bear in mind, however, that this did not involve the classical writers in any inconsistency. For the phenomenon of "value in use" was in their minds associated with free goods, and so might fairly be dismissed from economic consideration.

3. **Scarcity Goods eliminated because of their Rare Occurrence.**—The classical school did not get far in its attempts to apply the cost theory to the actual phenomena of economic life before it was confronted by goods whose value was far in excess of the cost either of production or of reproduction. This is the case with rare wines, pictures by the old masters, etc. It was held, however, that such monopoly or scarcity goods are so small a part of the world's exchanges that they may safely be ignored in any discussion of the general phenomena of value.

4. **The Law of Cost only applicable to Freely Reproducible Goods.**—Having eliminated both free and scarcity goods from the problem, the only phenomena

of value left for the older economists to explain were such as are associated with freely reproducible goods. In regard to such goods, it was held that if the producer does not at least obtain his cost he will cease to produce; if he secures a surplus above his cost, others will enter that branch of industry and increase the supply of the commodity until the price is forced down to the level of cost. This led the older economists to conclude that in cost we have a more or less exact measure of value. So satisfactory did this theory prove to be, so strong its hold upon economic thought, that it was not until the last quarter of the present century that another theory could find even a respectful hearing.

II. THE MARGINAL COST THEORY.

The earlier cost theory long found general acceptance, but it is manifest that it fails to account for the products of better land and, in general, for all commodities not produced at the margin. Yet it is not a difficult matter to state the theory so as to include all such commodities. This is done by substituting for the vague and indefinite concept of cost which the earlier economists had in mind the very definite concept of *marginal* cost.

5. The Graphical Representation of Marginal Cost.—This concept of marginal cost may be shown graphically, as in Fig. 1. The amount of commodity is here laid off along the line OM. Other things remaining the same, the cost of production of suc-

cessive increments of commodity increases, and is represented by lines at right angles to OM. Thus, if the amount of the commodity is represented by the length of the line OA, then the cost of production of the last increment added to the stock is represented by the length of the line AD. As in general the cost of production increases with each successive increment of commodity, the line of cost, ODN, is an ascending line.

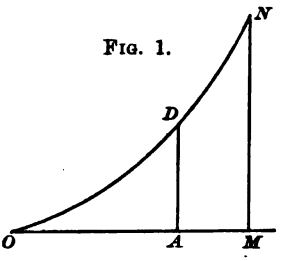

FIG. 1.

6. Ricardo's Statement of the Marginal Cost Theory.—Ricardo, in his discussion of the rent of land, shows that every increase in the supply of corn compels us to have recourse to less and less fertile lands or to an ever-increasing cost of production. He further contends that the value of corn is determined by the cost of the last or most expensive increment necessary to the maintenance of a given supply. Thus, if the supply of the commodity is OM (Fig. 1) and the cost of the final or most expensive increment is MN, then the value of each and every portion of the supply is determined by the cost MN of the final or marginal increment. Nor does Ricardo confine this proposition to the products of land, for he writes: "The exchangeable value of all commodities, whether they be manufactured, or the produce of the mines, or the produce of the land, is always regulated not by the least quantity of labor that will suffice for

their production under circumstances highly favorable and exclusively enjoyed by those who have peculiar facilities of production, but by the greater quantity of labor necessarily bestowed on their production by those who have no such facilities; by those who continue to produce them under the most unfavorable circumstances; meaning, by the most unfavorable circumstances, the most unfavorable under which the quantity of produce required renders it necessary to carry on the production." (Bohn edition, p. 50.) It is true that the orthodox writers sometimes lose sight of this marginal concept, or, at least, have failed to keep it consciously in mind, and yet a moment's consideration will show that the doctrine of rent, upon which their whole theory of distribution was based, rests in last resort upon the contention that price is determined by marginal cost. Under this contention the products of the better land, greater skill, or more efficient machines are eliminated as exceptions to the law of cost, since under this law it is the *marginal* cost that determines price.

CHAPTER II.

CONDITIONS UNDER WHICH THE COST THEORY FAILS.

It has already been shown that the cost theory of value rests upon the assumption that most commodities are freely reproducible. It is against this assumption that the Austrian economists have directed their main attack, and have insisted that scarcity values are the rule rather than the exception. It will be necessary, therefore, to examine with some care the argument by which these latter writers support this contention. One of the best statements of their case is found in that part of Böhm-Bawerk's "Capital and Interest" which is devoted to the refutation of the "Exploitation Theory of Interest."

I. THE CONTENTION OF THE AUSTRIAN ECONOMISTS.

7. Exceptions admitted by Ricardo.—On page 384 of "Capital and Interest" Ricardo is quoted as admitting that rare statues and pictures, scarce books and coins, and wines of a peculiar quality are exceptions to the law of cost; so, too, all products of the more fertile or more favorably situated land.

Ricardo is also quoted as admitting that the law of labor cost fails where capital is employed. He writes: "The principle that the quantity of labor

employed in the production of goods regulates their relative value suffers a considerable modification by the employment of machinery and other fixed and durable capital." (Chap. I., Secs. 4 and 5, "Principles.")

8. **Additional Exceptions.**—To this admitted list of exceptions Böhm-Bawerk adds all goods produced under the protection of a patent, coypright, or tariff, and then, as though this list of exceptions was not sufficient, Böhm-Bawerk calls attention to the fact that even those goods which are ordinarily regarded as freely reproducible are only so for the brief interval during which their price is at the normal point. At all other times or during their fluctuations on either side of this normal point their price is determined under monopoly conditions.*

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* Much confusion has arisen in the use of the phrase free competition. Thus, it is held by many that free competition prevails wherever there is no legal or other external restrictions on trade. It is manifest, however, that quite independent of such external restrictions there may be an interference with the freedom of competition. It will hardly be claimed that a handicapped man is competing freely, or that the lame and the halt compete freely with those who are fleet of foot, or, again, that the ignorant and the weak compete freely with the cunning and the powerful. What, then, do we mean by free competition? If we take the case of any pronounced monopoly good, we find that its price varies more or less widely from the normal price. From this we are led to conclude that any good whose price varies from the normal is a monopoly or scarcity good, whether the variation is

II. CASES IN WHICH THE CONTENTION OF THE AUSTRIANS FAILS.

9. Marginal Cost Theory holds for Products of Better Land, etc.—So far as the products of better land, greater skill, or more efficient machines are concerned, the case against the cost theory fails the moment that it is recognized that it is marginal cost that determines value. Ricardo in admitting that the products of the better land are exceptions to the law of cost lost sight of the fact that it is marginal cost that determines price.

10. Marginal Cost Theory holds for Products of Fixed Capital.—While the employment of machinery or other fixed capital tells very seriously against a *labor* theory of value, it does not necessarily tell against a *cost* theory of value if it is admitted that abstinence is a disutility or cost. Ricardo's statement of the case is certainly open to this interpretation. He writes: "Mr. Malthus seems to think that

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large or small, or is maintained for a long or short interval. It follows from this that so-called freely reproducible goods are in reality scarcity goods, except during the interval that their price is at the normal point. Here, then, is the ultimate test of free competition,—the existence of normal price, or the existence of those conditions in which marginal utility and marginal disutility are equal. Any departure from the normal or any failure in the equating of utility and disutility implies the existence of a marginal surplus; and the existence of such a surplus indicates that there is some interference with the freedom of competition.

it is part of my doctrine that the cost and the value of a thing should be the same; it is, if he means by cost, cost of production including profits."*

III. CASES IN WHICH THE CONTENTION OF THE AUSTRIANS MAY BE SUSTAINED.

11. Patents, Tariffs, etc.—In a more recent publication† Böhm-Bawerk seems to have realized the weakness of his argument upon the two points just mentioned (goods produced by means of fixed capital or on the more fertile lands, etc.). In his restatement of the case against the cost theory he confines himself to those instances where the freedom of competition is interfered with by patents, tariff laws, etc. He writes: "There are at the present time very few products in which some patented machine or process or some import duty on raw or auxiliary material does not play a part."

In other words, he contends, and rightly, that scarcity goods are the rule; that competition at the *margin* is frequently interfered with by patent, import duty, etc.; that non-competing groups among producers do exist; that the marginal producer frequently secures a surplus above his cost, and, hence, that even *marginal* disutility must fail as the ulti-

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* Ricardo undoubtedly uses the term profits in a somewhat confused way; but that it here includes interest there can be little doubt.

† Annals of American Academy, September, 1894, p. 55.

mate standard of value. Böhm-Bawerk does not state the case in just this way, but the most cursory examination of his article on "The Ultimate Standard of Value" will show that in this later contribution he ignores all portions of the product that are produced under specially advantageous circumstances, and confines himself to showing the frequent occurrence of those monopoly or scarcity goods in the production of which the *marginal* producer secures a surplus over and above all cost, either in labor or abstinence. It is important that this point in the argument should be clearly apprehended, for in another chapter I shall endeavor to show that the marginal utility theory fails for much the same reason,—to wit, that in many instances the *marginal consumer* secures a surplus.

CHAPTER III.

THE UTILITY THEORY OF VALUE.

I. THE EARLIER UTILITY THEORY.

THE first attempt to formulate a theory of value of which we have any record resulted, as we have seen, in a Cost Theory of Value. It is, however, more than probable that the first explanation that suggested itself was that things are valuable because they are useful. The utility here in mind was not, however, the precise modern concept of marginal utility, but a more or less vague and indefinite concept of utility like the earlier concept of cost.

12. The Failure of the Earlier Utility Theory to explain the Paradoxes of Value.—The moment an attempt is made to apply this Earlier Utility Theory to the several paradoxes of value its defects become manifest. It fails completely to explain why such useful things as air and water are valueless; why gold is more valuable than the more useful commodity iron; or why the Dutch East India Company destroyed a portion of its crops when they were exceptionally large. It was doubtless this failure of the earlier utility theory of value that compelled men to have recourse to the cost theory, in which they found a more or less satisfactory explanation of these paradoxes.

The modern advocates of the utility theory of value hold that this earlier abandonment of the utility theory was premature, and that under the reconstructed form of the Marginal Utility Theory of Value we have an entirely satisfactory explanation of the general phenomena of value and of the several paradoxes that proved so fatal to the earlier statement of the utility theory.

II. THE MARGINAL UTILITY THEORY OF VALUE.

That value and price depend upon demand and supply has long been recognized as a truism. Again, it was recognized that the value of a commodity cannot be determined unless we know the amount of the commodity offered for sale. But it was not until the promulgation of the marginal utility theory of value that this mutual interdependence of supply, demand, and value was apprehended in an entirely clear and definite way.

The Theory of Márginal Utility is based upon the familiar experience that pleasures when repeated decrease in intensity. Hence if there is but one loaf of bread between a man and starvation he will, of course, value it very highly. But if he has a hundred loaves he will not value bread so highly. In this case the value of the bread will be fixed by the pleasure, satisfaction, or utility dependent upon the possession of the hundredth loaf. If the man has but fifty loaves, the value of the bread will be dependent on the utility of the fiftieth loaf; and in

general the value of the bread will be dependent upon the utility of the last or marginal loaf.

13. Gossen and his Work.—The first to formulate the Marginal Utility Theory of Value was Herman Heinrich Gossen in his "Entwickelung der Gesetze des menschlichen Verkehrs, etc.," published in 1854. In his introduction, Gossen declared that he had made as important a discovery in the field of National Economy as Copernicus had made in the domain of Astronomy. As a matter of fact, he did give us a fairly complete statement of the modern theory of marginal utility. The book, however, was received with such scant courtesy that the author withdrew it from the trade and died a bitterly disappointed man.

Gossen starts out with Bentham's thesis, that happiness or utility is the ultimate motive of all human action. Gossen clearly recognizes that in the consumption of a commodity there is a more or less regular decrease in the pleasure of consumption; and that if the supply is large enough the point of satiety would ultimately be reached. Again, an early repetition of the act of consumption would involve a lower initial pleasure and a shortening of the period of enjoyment. Gossen sees, too, that it is the marginal pleasure or utility that fixes the value of the commodity, and holds that the condition of exchange of two commodities is the equality of the pleasure derived from the last atoms (letzten Atoms) of the two commodities exchanged. Again, he holds

that the ideal condition for society as a whole is where commodities are so distributed among men that the last atom of every commodity yields the same amount of pleasure. Gossen's work differs from that of more recent writers in that he never loses sight of the moral or social aspect of the question. Marginal utility only interests him as it enables him to formulate the conditions of human happiness or the conditions of an ideal society. In the development of his argument he employs the same graphic illustrations that have since become so familiar. He, however, lays off units of time on the horizontal axis instead of units of commodity; but as a unit of commodity is consumed in a unit of time, the result is the same as if a unit of commodity were laid off on the horizontal axis.*

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* The following passages are italicized in Gossen:

Der Mensch richte seine Handlungen so ein, dass die Summe seines Lebensgenusses ein Grösstes werde. (Page 3.)

1. Die Grösse eines und desselben Genusses nimmt, wenn wir mit Bereitung des Genusses ununterbrochen fortfahren, fortwährend ab, bis zuletzt Sättigung eintritt. (Page 4.)

2. Eine ähnliche Abnahme der Grösse des Genusses tritt ein, wenn wir den früher bereiteten Genuss wiederholen, und nicht bloss, dass bei wiederholter Bereitung die ähnliche Abnahme eintritt, auch die Grösse des Genusses bei seinem Beginnen ist eine geringere, und die Dauer, während welcher etwas als Genuss empfunden wird, verkürzt sich bei der Wiederholung, es tritt früher Sättigung ein, und beides, anfängliche Grösse sowohl, wie Dauer, vermindern sich um so mehr, je rascher die Wiederholung erfolgt. (Page 5.)

14. Jevons, Walras, and Menger.—The first recognition of the great importance of Gossen's work is found in the preface to the second edition of Jevons's "Theory of Political Economy," published in 1879. German economists seem to have remained ignorant even of its existence until their attention was thus called to its great importance. Jevons published his first edition in 1871, while at about the same time two other economists, Walras and Menger, promulgated the same doctrine. It is, therefore, most interesting to note that the message which in 1854 could not even secure a hearing is so much in the air in 1871 that three widely separated economists, Jevons, Walras, and Menger, gain fame in proclaiming it. There seems to be but one explanation of this phenomenon. Gossen wrote in 1854 while economists were still in bondage to the fundamental premise of orthodox

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Der Tausch bleibt für *A*, wenn gleiche Quantitäten gegen einander vertauscht werden, so lange vortheilhaft, bis der Werth des letzten Atoms bei beiden Gegenständen, welche in den Besitz des *A* gelangen, gleich gross geworden ist.

Es muss jeder der beiden Gegenstände nach dem Tausche unter *A* und *B* der Art sich vertheilt finden, dass das letzte Atom, welches jeder von einem jeden erhält, beiden gleich grossen Werth schafft. (Pages 84 and 85.)

Damit durch den Tausch ein Grösstes von Werth entstehe, muss sich nach demselben jeder einzelne Gegenstand unter alle Menschen so vertheilt finden, dass das letzte Atom, welches jedem von einem jeden Gegenstande zufällt, bei ihm den gleich grossen Genuss schafft, wie das letzte Atom desselben Gegenstandes bei einem jeden andern. (Page 85.)

economics, that scarcity commodities are the exception and freely reproducible goods the rule. But by 1871 economic conditions had so changed that economists were constrained to recognize the utter falsity of this proposition, and so were compelled to seek for a theory of value that would include the case of scarcity goods.

The cause of the failure of the earlier advocates of the utility theory is now manifest. They did not even see the real difficulty that confronted them; did not recognize the fact that in the consumption of a given commodity a number of different utilities are developed. It therefore never occurred to them to ask the interesting question, Which of these utilities is it that determines the value of the commodity? As this is a crucial point in the development of the modern utility theory, it may be well to allow its advocates to state the case in their own language.

15. Böhm-Bawerk's Statement of the Theory of Marginal Utility.—After a careful elaboration of a number of concrete instances, Böhm-Bawerk sums up: "The case, then, stands as follows: Wants which are more important than this 'last' want will not be affected by the loss of the good, for their satisfaction is, as before, guaranteed in case of need by the replacement of substitutes.* Nor will those wants be

* This is based upon the assumption that we have a number of equally efficient increments of commodity, say fifty loaves

affected which are less important than this 'marginal want,' for they go unsatisfied whether the good is there or not. The only want affected is the last of those that otherwise would be satisfied: it will be satisfied if the good is there; it will not be satisfied if it is not there. It is thus the dependent want we were seeking.

"Here, then, we have reached the goal of the present inquiry and may formulate it thus: the value of the good is measured by the importance of that concrete want, or partial want, which is *least urgent* among the wants that are met from the available stock of similar goods. What determines the value of a good, then, is not its greatest utility, not its average utility, but the least utility which it, or one like it, might be reasonably employed in providing under the concrete economical conditions. To save ourselves a repetition of this circumstantial description,—which, nevertheless, has to be somewhat circumstantial to be quite correct,—we shall follow Wieser in calling this least utility—the utility that stands on the margin of the economically permissible—the economic Marginal Utility of the good. The law which governs amount of value, then, may be put in the following very simple formula: The value of a good is determined by the amount of its marginal utility.

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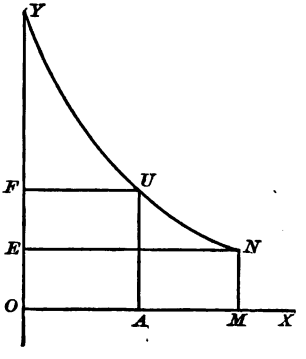
of bread. In this case the loss of one loaf would lead to the substitution of another equally efficient loaf.

"This proposition is the keystone of our theory of value. But it is more. In my opinion it is the master-key to the action of practical economic men with regard to goods. In the simplest cases, as in all the tangle and complication which our present varied economic life has created, we find men valuing the goods with which they have to deal by the marginal utility of these goods, and dealing with them according to the result of this valuation. And to this extent the doctrine of marginal utility is not only the keystone of the theory of value, but, as affording the explanation of all economical transactions, it is the keystone of all economical theory."*

16. **Graphic Illustration of the Marginal Utility Theory.**—This theory finds graphic illustration in Fig. 2. The amount of commodity is here laid off along the line OM. The utility of successive increments of commodity is represented by lines at right angles to OM. Thus, if the amount of the commodity is represented by the length of the line OA, then the utility of the last increment of the supply of the commodity is represented by the length of the line AU. But if the amount of the commodity is repre-

FIG. 2.



* Positive Theory of Capital, pp. 148, 149.

sented by the length of OM, the utility of the last increment of the supply is represented by the length of MN. As the utility decreases with each successive increment of the supply of the commodity, the line of utility, YUN, is a descending line. Again, according to the marginal utility theory, the value of the whole commodity is determined by the utility of the last increment of the supply of the commodity. Thus, if the amount of commodity is OA, the marginal utility or value of the commodity is AU; if, however, the amount of commodity is OM, then the marginal utility or value of the commodity is MN.

(*a*) VALUE PER UNIT VERSUS TOTAL VALUE.—It should be noticed that under the above assumptions AU and MN represent severally the marginal utility or *value per unit* of the commodity. There is, however, another concept of value with which it is sometimes necessary to deal, and which must be carefully distinguished from the concept of value per unit. The concept here referred to is that of *total value*, which is represented by the areas of the rectangles OAUF and OMNE, or by quantity of commodity multiplied by value per unit.

(*b*) TOTAL VALUE VERSUS TOTAL UTILITY.—There is still another concept that must be carefully distinguished from total value. We here refer to the concept of *total utility*, which is represented by the area OAUY if the margin is at A and by the area OMNY if the margin is at M. It is here manifest that total utility and total value are essentially

different concepts, total utility exceeding and including total value.

17. The Marginal Utility Theory and the Paradoxes of Value.—(*a*) WHY ARE AIR AND WATER VALUELESS, AND WHY IS IRON OF LESS VALUE THAN GOLD?—To both of these questions the advocates of marginal utility find a ready answer. We cannot do better than to quote again from Böhm-Bawerk: "Here, then, we have an entirely natural explanation of the phenomenon which originally struck us as so surprising, that comparatively 'useless' things, such as pearls and diamonds, have so high a value, while infinitely more 'useful' things, like bread and iron, have a far less value, and water and air no value at all. Pearls and diamonds are to be had in such small quantities that the relative want is only satisfied to a trifling extent, and the point of marginal utility which the satisfaction reaches stands relatively high. Happily for us, on the other hand, bread and iron, water and light, are, as a rule, to be had in such quantities that the satisfaction of all the more important wants which depend on them is assured. Only very trifling concrete wants, or no wants at all, are dependent, for instance, on the command over a piece of bread or a glass of water. It is, of course, true that in abnormal circumstances—as, for instance, in besieged towns, or in desert journeys, where water and food is scarce, and small stores only suffice to meet the most urgent concrete wants of meat and drink—the marginal utility flies

up. According to our principles the value of these goods, otherwise of so little account, must rise also, and the inference finds ample empirical confirmation in the enormous prices paid in such circumstances for the most wretched means of subsistence. Thus, those very facts which, at first sight, seemed to contradict our theory that the amount of value is dependent upon the amount of utility, on closer examination afford a striking confirmation of it."*

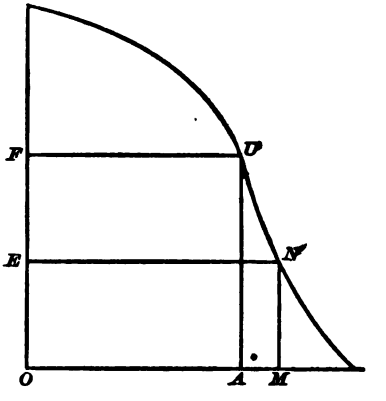
There is, however, another phase of this paradox that may need some further explanation. We have seen in what way and why gold may have a greater value than iron, but we have not explained just how and why we continue to think of iron as the more useful metal. That is, we have not brought this fact into accord with our utility theory of value. Put in a brief way, the explanation is found in the fact that a great reduction in our supply of so-called necessaries might raise their marginal utility to almost any point or degree of importance,—even to the importance of maintaining life itself. On the other hand, no reduction in the supply of commodities that are not necessary for the maintenance of life could ever reach the same degree of importance or the same marginal utility. Böhm-Bawerk's more elaborate discussion of this question will be found on page 144 of "Positive Theory of Capital."

(*b*) WHY DID THE DUTCH EAST INDIA COMPANY

* Positive Theory of Capital, pp. 152, 153.

DESTROY A PORTION OF THEIR CROPS? This paradox is readily explained in terms of the marginal utility theory of value. Let us assume (Fig. 3) that our utility curve takes a sudden change in direction at the point U, or that an increase in the supply of commodity beyond OA occasions a much more rapid decline in marginal utility than was occasioned by an equal increase in commodity before that point was reached. The result manifestly would be that, despite the increase, AM, in the quantity of commodity, the total value has decreased from the area OAUF to the area OMNE. Under such circumstances a seller controlling a large part of the supply might profitably destroy a portion of his commodity, since he would thereby increase not only the marginal utility but the total value as well. From this, it is clear that the Marginal Utility Theory is even more efficient than the Cost Theory in resolving the several paradoxes of value.

FIG. 3.



CHAPTER IV.

CONDITIONS UNDER WHICH THE UTILITY THEORY FAILS.

It has already been shown that the Earlier Utility Theory failed to explain the several paradoxes of value. On the other hand, it has been seen how complete and satisfactory are the explanations offered by the Marginal Utility Theory. It remains to be shown that even this theory does not afford an entirely satisfactory solution of the ever interesting problem of price.

Towards the close of his earlier argument Böhm-Bawerk writes: "If—what is practically inconceivable—production were carried on in ideal circumstances, unfettered by limitations of space and time, with no friction, with the most perfect knowledge of the position of human wants requiring satisfaction and without any disturbing changes of wants, stocks, or technique, then the original productive powers would, with ideal and mathematical exactitude, be invested in the most remunerative employments, and the law of costs, so far as we can speak of such a law, would hold in ideal completeness." *

In other words, it is here maintained that the law of cost is only true under the assumption of an ideal

* Positive Theory of Capital, p. 233.

condition of free competition among producers. It is the purpose of the present chapter to show that the law of marginal utility is likewise based upon the assumption of an ideal condition of free competition.

It will be remembered, however, that the Austrian economists called attention to the fact that Ricardo admitted the failure of the Cost Theory in the case of rare wine, paintings by the old masters, etc. (See page 25.) It may, therefore, be well to note that they themselves have made even more serious admissions as against their own theory.

18. Böhm-Bawerk's admitted Exceptions to the Law of Marginal Utility.—On page 217 of "The Positive Theory of Capital," Böhm-Bawerk admits that marginal utility fails, at least in exactness, in the case of money and labor. May it not, then, fairly be urged that while "there are at the present time very few products in which some patented machine or process or some import duty on raw or auxiliary material does not play a part," yet it is equally true that there are few products in which variations in the value of money and labor do not play a part?

Again, in his discussion of the three possible forms of exchange, Böhm-Bawerk writes, "In isolated exchange—exchange between one buyer and one seller—the price is determined somewhere between the subjective valuation of the commodity by the buyer as upper limit and the subjective valuation

of the seller as lower limit."* Or he admits that in all such cases the marginal utility of the good to the buyer and seller only establishes limits within which the price may vary. In other words, marginal utility fails in exactness in all cases of isolated exchange.

Then, too, of the case of one-sided competition, he writes: "First. The competition of buyers has the effect of narrowing the sphere within which price is determined, and narrowing it in the upward direction. Second. One-sided competition of sellers forms the exact converse of the foregoing. Entirely analogous tendencies lead to entirely analogous results—only in an opposite direction."† Here we again have an admission that there is quite a sphere within which the price may vary, or an admission that marginal utility fails in exactness in all cases of one-sided competition.

Lastly, in his discussion of two-sided competition, he sums up as follows: "If, finally, we substitute the short and significant name of 'Marginal Pairs' for the detailed description of the four parties whose competition determines the price, we get this very simple formula: The market price is limited and determined by the subjective valuation of the two Marginal Pairs."‡ In other words, Böhm-Bawerk

* Positive Theory of Capital, p. 199.
† Ibid., p. 201.
‡ Ibid., p. 209.

here admits that in all three forms of exchange the valuations of buyers and sellers merely establish limits within which the price may vary. Again, he writes: "According as in the conduct of the transaction the buyer or seller shows the greater dexterity, cunning, obstinacy, power of persuasion, or such like, will the price be forced either to its lower or to its upper limit." * *Clearly, then, the price in all three cases may be determined at a point which is less than the valuation of the marginal buyer. From this it follows that this last or marginal buyer secures a surplus, and hence that marginal utility fails as an exact determinant of price.*

19. How Böhm-Bawerk would escape from the Consequences of these Admissions.—It will now be interesting to inquire how Böhm-Bawerk would escape from a position so fatal to the Marginal Utility Theory. This he endeavors to do in his chapter on Price. The first two forms of exchange are ignored on the ground that the bulk of the world's exchanges comes under the head of two-sided competition. He then devotes his attention to this last form, and endeavors, first, to eliminate the marginal pair of sellers, and, second, to reduce the difference in the valuations of the marginal pair of buyers to an amount so small that it may safely be ignored. Price is then determined by the valuation of the last buyer or by marginal utility. It will be well to follow his reason-

* Positive Theory of Capital, p. 199.

ing upon this point with some care. (See "Positive Theory of Capital," pp. 220, 221.)

(*a*) THE ELIMINATION OF THE MARGINAL PAIR OF SELLERS.—Let us turn first to that part of his argument in which he seeks to eliminate the marginal pair of sellers. It is undoubtedly true that under modern conditions many commodities are produced in anticipation of the market, and "when goods are once produced and the owner can do nothing with them for his own personal wants, they must, all the same, seek a market," and the seller must accept whatever price the buyer is willing to pay. In other words, the marginal utility of the good to the seller is here so low that it does not enter into the problem, the determination of the price coming entirely from the side of the buyer. This, I take it, is the reasoning by which Böhm-Bawerk eliminates the marginal pair of sellers. Nevertheless, it may fairly be urged that no inconsiderable part of many commodities is still made or produced to order, or while more clothes are now manufactured in anticipation of the market than a hundred years ago, yet some clothes still are and probably ever will be made to order. And a standard of price that fails to determine the price of goods made to order can hardly be accepted as a universal standard of price.

The orthodox school, undoubtedly, had in mind this latter class of goods, while the Austrians have called attention to the fact that in modern times the tendency is to produce in anticipation of the market.

So long as they urge this fact to show the failure of the law of cost I am not here disposed to disagree with them, but when they rest their theory of value upon the assumption that goods made to order now form so inconsiderable a part of the world's production that they may safely be ignored, I am constrained to part company with them.

(*b*) THE ELIMINATION OF ONE OF THE TWO MARGINAL BUYERS.—Note again, that Böhm-Bawerk restricts the law of marginal utility "to prices actually established within a large and organized market." He then concludes: "If the buyers are very numerous, the interval between the figures which two successive buyers put on their valuation is so small that the zone limited by the figure of the last buyer and that of the first unsuccessful competitor is narrowed almost to a point. And so far as this is the case it may be asserted, with sufficient exactness, of the economic exchange which goes on in large markets, that the market price is determined by the Valuation of the Last Buyer." In other words, he practically assumes that the bulk of the world's goods is sold in markets that are large and well organized; a contention not easily maintained, especially in regard to retail markets or those that touch the consumer most nearly. In any event, there are many goods sold in markets that are neither large nor well organized, and under the above assumption these goods are clearly excluded from the operation of the law of marginal utility.

To sum up, then, *we find, by the admissions of Böhm-Bawerk himself, that the law of marginal utility fails in exactness, not only for money and labor, but also for all cases of isolated exchange, for all cases of one-sided competition, for all goods made or produced to order, and for all goods sold in markets that are not large and well organized. In other words, we find a list of admitted exceptions to the Law of Marginal Utility that is at least as formidable as any that can be urged against the Law of Cost.*

20. The Defect in the Analysis of the Austrian Economists.—In Chapter II. the failure of the cost theory was shown not only by the many serious and admitted exceptions to this theory, but also by the fact that in last resort it rests upon the unwarranted assumption of ideal free competition among producers. In the present chapter I have thus far shown the failure of the Marginal Utility Theory by an equally serious list of admitted exceptions. It now remains for me to show that the Marginal Utility Theory rests upon a like unwarranted assumption of free competition.

(*a*) THE MARGINAL UTILITY THEORY RESTS UPON THE UNWARRANTED ASSUMPTION OF FREE COMPETITION AMONG CONSUMERS.—We have just seen that if the buyers are very numerous the difference between the valuations of the "last buyer and the first unsuccessful competitor is narrowed almost to a point." We have now to inquire what happens when this difference in valuation is *not* narrowed to a point.

It is manifest that under such circumstances there might be quite an appreciable decline in the price before the first unsuccessful buyer would really begin to *compete* for the commodity in question. In other words, the existence of an appreciable difference between the valuation of the last buyer and the first unsuccessful competitor implies or is the result of some failure in the freedom of competition among buyers or consumers.

Now, it may be urged by the advocates of marginal utility that under the assumption of a "large and organized market" the probability of such a failure in the freedom of competition is very remote; that under this assumption price will vary continuously with the supply of the commodity and buyers will be able to range themselves in a differential series, etc. I will not combat this contention at this point in the argument, but would call attention to the unwarranted assumption upon which this contention rests. *For if the existence of an appreciable difference between the valuations of the two marginal buyers implies the existence of some interference with the freedom of competition among buyers or consumers, then the absence of such difference between their valuations implies the existence of ideal free competition among buyers or consumers. In other words, the Marginal Utility Theory rests in last resort upon the unwarranted assumption of ideal free competition among consumers just as the Marginal Cost Theory rests upon*

the like unwarranted assumption of ideal free competition among producers.

(*b*) MARGINAL UTILITY THEORY FAILS BECAUSE THE MARGINAL CONSUMER FREQUENTLY SECURES A SURPLUS.—Let us now return to the contention that where the buyers are numerous the difference between the valuations of the marginal pair of buyers is narrowed almost to a point. This, as we have just seen, rests upon an altogether unwarranted assumption. Though there were a million buyers, how can it be said that the valuation of the million and first will necessarily vary by a differential from the millionth buyer? Why may there not be at any point a non-competing group or an interference with the freedom of competition among buyers as well as among sellers, among consumers as well as among producers? If such an interference with the freedom of competition does arise, then the price may be fixed at a point "which is somewhat less than the valuation of the thousandth buyer and somewhat higher than the valuation of the thousand and first." Under these conditions the utility of the commodity to the actual marginal buyer would be greater than the price paid. He would therefore secure a marginal surplus and marginal utility would here fail as the standard of price, for the same reason that it fails in the case of isolated exchange, one-sided competition, and for all goods that are sold in markets that are not large and well organized. *In other words, marginal utility fails because the marginal consumer fre-*

quently secures a surplus, just as marginal cost fails because the marginal producer frequently secures a surplus.

That the introduction of the concept of consumption as varying by differential increments has been of advantage to economic theory none will deny; and yet it is questionable whether this concept has not been as fruitful of errors as any yet introduced into the science. For its advocates fail to see, or at least to keep in mind, the assumption upon which it rests, —namely, an ideal condition of free competition among consumers. So long as we do not lose sight of this, the concept of differential increments may be useful for certain theoretic purposes. But when we lose sight of the assumption that lies back of the Marginal Utility Theory, and hold that free competition on the side of the consumer exists generally in the economic world, confusion must result.

There is probably no commodity whose market satisfies the ideal conditions more closely than that of wheat, and yet it may very readily have happened that in a recent decline in the price of wheat there may have been quite an appreciable break between the point at which the price corresponded to the marginal utility of wheat for the feeding of human beings and the point where it became profitable to feed it to hogs. Again, while at certain prices the sugar market may be very elastic, yet a point might readily be reached where all our present uses or desire for sugar would be satiated. In this

case quite an appreciable fall in price might fail to increase its consumption. This is practically the case with salt at present prices. So, too, with pepper, matches, and a number of other commodities. It hardly need be again urged that this is generally true of all cases of isolated exchange of one-sided competition, and of all goods whose market is neither large nor well organized. As a matter of fact, the market for these, as for all other commodities, is only perfectly elastic or satisfies the conditions assumed by the Austrian economists so long as the price remains within more or less definite limits. It, however, loses this elasticity or fails to satisfy these conditions when the price passes either the upper or lower of these limits.

That the orthodox school practically assumed the existence of an ideal condition of free competition among producers cannot be denied. But, as we have endeavored to show, the advocates of marginal utility have assumed a like ideal condition of free competition, or have assumed that there are no non-competing groups among consumers. That such an ideal condition of free competition, either on the side of production or of consumption, exists generally in the markets of the world, or is permanently established in the market of any one commodity, may well be questioned. It may be that an interference with the freedom of competition is much more frequent among producers than among consumers. And this because of the greater facility for combining

which the producers enjoy. But be that as it may, it still remains true that a theory of price which rests upon the assumption of free competition among consumers is without sufficient warrant and can hardly be said to furnish us with an ultimate standard of price.

CHAPTER V.

THE MONOPOLY THEORY OF PRICE.

It is the contention of the present writer that while *value* is determined by marginal utility *price* is never so determined save in the case of normal value and price. In the case of scarcity goods, or the great bulk of the world's commodities, the marginal utility of the good to the consumer and its marginal utility to the producer only establish limits within which the price may vary. Its final location depends upon the relative monopoly strength of consumer and producer, and so is incapable of any exact determination. This in brief is the Monopoly Theory of Price which will here be proposed.*

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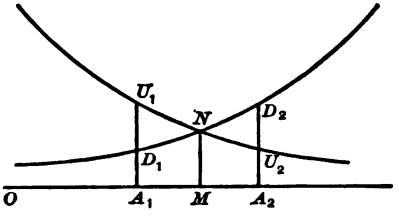
* By value is here meant the subjective importance of a good. This is measured in terms of marginal utility. By price is meant the quantity of money, or of the objective money commodity for which the good in question will exchange.

Value as thus defined corresponds to the subjective use value of the Austrian economists, and price to their objective exchange value. It is true that we might say that the objective exchange value of a cow is the horse for which it is exchanged, but in any developed society these direct exchanges are rare,—almost all exchanges being made against money. And so we find that as a matter of fact the Austrians limit objective exchange value to the phenomenon of price.

I. THE PRICE OF A SINGLE GOOD.

21. Normal Value and Price.—If with the older economists we hold that free competition is the rule and scarcity goods the exception, then our investigation must be confined to the phenomena of normal value and price. In this case marginal utility, marginal disutility, value, and price all coincide. This is brought out quite clearly in Fig. 4. In Fig. 1 we had the diagram of the line of cost or disutility. In Fig. 2 we had the diagram of the line of utility. In Fig. 4 these two diagrams are combined. Here the line of utility, U_1U_2, and the line of disutility, D_1D_2, intersect at the point N. If the supply of the commodity is OA_1, the utility A_1U_1 exceeds the disutility A_1D_1. This indicates that the production of the commodity is profitable, and therefore that others will be induced to enter this branch of industry. If this results in an increase of the amount of commodity to OA_2, the disutility A_2D_2 exceeds the utility A_2U_2. This indicates that the production of the commodity is no longer profitable; a restriction in the amount of commodity produced will therefore result. The tendency, of course, will be for the production of the amount of commodity to settle at OM, where the

FIG. 4.



utility and disutility are equal. This is the case of normal value and price, both of which are here represented by MN.*

22. Other Conditions under which Marginal Utility determines Price.—It is true that if competition is assumed to be absolutely free on the side of the consumers (that is, the producers have the entire monopoly advantage), the price of the good may be forced up to the limit of its marginal utility to the consumer. But, on the other hand, it is equally true that if competition is absolutely free on the side of the producers (the consumers having the entire monopoly advantage) the price may be forced down to the extreme limit of the marginal utility of the good to the producer. This finds graphic illustration in Fig. 4. The case where the producer has the monopoly advantage is indicated by $A_1D_1U_1$, while the consumer has the monopoly advantage in the case indicated by $A_2U_2D_2$.

It may at first be somewhat confusing to speak of this last case as a case of monopoly or scarcity price, since the supply of the good offered by the producer is in excess of the normal supply. The confusion, however, is largely due to our tendency to regard one-half of the transaction as the whole phenomenon, just as in physics there is a tendency to think of force and resistance as separate phenomena.

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* This diagram was, I believe, first employed by Marshall in a paper that only had a private circulation.

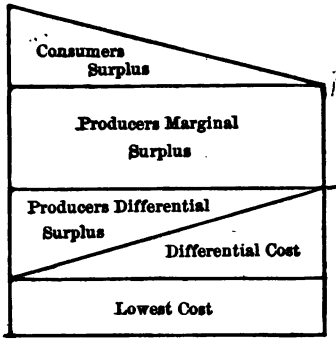
The physicist, however, sees very clearly that action and reaction are necessary complements of each other, and in the same way the commodities offered in exchange by the producer and the consumer are necessary complements of each other. While it may not be strictly correct to speak of the commodity offered by the producer as a scarcity good when its price is below its cost, yet it is true that its price is determined under monopoly conditions, only the monopoly is due to the relative scarcity of the commodity offered in exchange by the consumer; the monopoly, therefore, inures to the benefit of the consumer by enhancing the purchasing power of his commodity. In other words, we here have one of those unfortunate abstractions of the understanding, as Hegel styles them, in which half the phenomena is taken for the whole.

In general, however, neither competition nor monopoly is absolute on either side of the transaction. As a rule, the weaker party still retains some monopoly strength, and the price is determined at some intermediate point by the relative monopoly strength of buyer and seller. In other words, the upper and lower limits of prices being determined by marginal utility and marginal disutility, the price approaches the former if, with the Austrian school, we assume that the producers have the monopoly advantage, and approaches the latter if, with the orthodox school, we assume that the consumers have the monopoly advantage. It would, of course, greatly simplify the mat-

ter if we could solve all our problems in terms of one or the other of these variables, but, unfortunately, the phenomena are too complex for any such solution. *The best that can be hoped for is a determination between the limits of marginal utility and marginal disutility. At what intermediate point the price will actually be fixed is not given to us to say, for this depends upon the relative monopoly strength of the contestants, and so upon an indeterminate element.*

23. The Diagram of the Austrian Economists.—In conclusion, it may be said that the entire discussion resolves itself into the question, May or do marginal consumers' surpluses arise? The advocates of marginal utility assume, for the most part unconsciously, that they do not arise in the bulk of the world's exchange. This is brought out very clearly in Fig. 5, a diagram which S. N. Patten employs to such good purpose. In this the consumer's surplus is always represented as a triangle or as a differential surplus, the total rectangle or marginal surplus being given to the producers. (See "The Theory of Dynamic Economics," p. 91.)

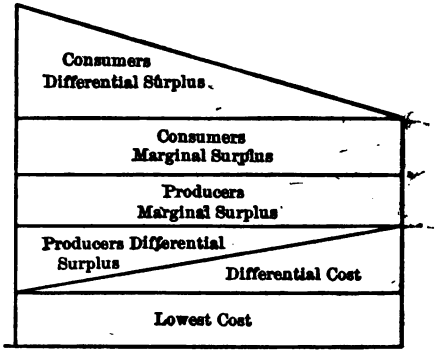
FIG. 5.



24. Diagram of the Monopoly Theory of Price.—My own contention is that this scheme of distribution involves the assumption that there are no non-

competing groups among consumers, or that among them we have an ideal condition of free competition. The obligation certainly rests upon the Austrian school to show that this is true. If it is not true, then the marginal surplus will be divided, as is shown in Fig. 6, between consumers and producers in accordance with their relative monopoly strength.*

FIG. 6.



II. THE PRICE OF COMPLEMENTARY GOODS.

Thus far in examining the various phenomena of value the discussion has been confined to the deter-

* It is well known that the promulgation of the marginal utility theory of value gave a strong impulse to the mathematical treatment of problems in economic theory. Of course, protests against this have been made on the ground that the subjective utilities are not capable of exact measurement. What is really meant by this is, that the subjective phenomena of value are not capable of exact measurement in the terms of the objective phenomena of price. For, as has been shown, the subjective and objective phenomena are never in exact correspondence except in the case of normal value. From this it follows that economics cannot be treated as an exact science, though certain laws or tendencies may be more or less clearly determined.

mination of the price of a single good. It will now be necessary to consider the phenomena in which several productive goods enter into the creation of a resulting consumption good.

We have here a case of the phenomenon that Menger has so happily characterized as "Complementary Goods." The pleasure that may be realized from the resulting consumption good is dependent upon our possession of each and all of the complementary productive goods. Hence in parting with one of the latter we lose not only the pleasure that would result from the direct consumption of that single commodity, but also an additional pleasure due to the importance of this single good to the complementary group of which it forms an essential part. In other words, a single commodity when it becomes a part of such a group has, as it were, two marginal utilities or values. This raises the question, Which of these, or what combination of these, determines the price of this productive good?

25. The Confusion in the Austrian Treatment of Complementary Goods.—Böhm-Bawerk insists most strenuously that even in this connection marginal utility is the all-sufficient determinant of value and price. He writes, "It is easy to see that the intimate corelation of complementary goods—the corelation in which they afford this utility—will be reflected in the formation of their value. This leads to a number of peculiarities, all, however, occurring within the limits of the universal law of marginal utility." ("Positive

Theory of Capital," p. 170.) But, since such goods have two marginal utilities, the question naturally arises, Which of these determines their price?

Menger holds that the price of such good is determined by the sum of the two utilities. Menger's defence of this contention might prove very interesting.

Wieser tells us that "The imputation of the productive contribution assigns in this way to every productive good a *medium* share. To calculate the productive contribution, and therefore also the value at this *medium* amount, is sound common sense." ("Natural Value," p. 93.)

26. Complementary Goods an Ordinary Case of Scarcity Price.—Here, as elsewhere, appeals to "common sense" are to be viewed with suspicion. The difficulty which the Austrian economists find in the case of complementary goods is due to the fact that in their general discussion of value and price they have labored to eliminate the determination between limits, and to show that both value and price depend in last resort upon the marginal utility of the good to the consumer or buyer. Hence, when they came to the question of complementary goods, they thought they had found an exceptional complication, for it was clear that in this case the marginal utility to buyer and seller only set limits within which the price may vary. And so, without further analysis, we are told that the price is fixed at the middle point between these limits, or that it is "a *medium* amount."

As a matter of fact we here have a case of every day scarcity price. The owner of the other production goods necessary to the complementary group and the owner of the single good that is likewise necessary to the completion of this group stand over against each other as the prospective buyer and seller of the single good. Here, as in every instance of scarcity price, the marginal utility of the good to the buyer and its marginal utility to the seller fix the upper and lower limits of the price. At what point the price will actually be fixed depends upon the relative monopoly strength of the parties to the transaction. The price, therefore, is incapable of reduction under any definite law save when the single good is freely reproducible. In every other instance the price depends on the relative monopoly strength of buyer and seller. It is in this way, and in this way alone, that every good that enters into a complementary group has its share in the joint product determined. From this it is manifest that complementary goods are not a complication that demands a special analysis. Instead they are included under the ordinary and prevailing case of scarcity price.

CHAPTER VI.

VALUE AND PRICE.

NOTHING has interfered more seriously with the popular acceptance of the Marginal Utility Theory than the formidable appearance of the terms employed by its advocates,—to wit, subjective use value, subjective exchange value, and objective exchange value. Indeed, no one can deplore more earnestly than the Austrians themselves the cumbersome terminology which seems to be necessitated by their analysis of value and price. Böhm-Bawerk writes: "I frankly confess that I would gladly exchange these pedantic and clumsy expressions for terms more euphonious and popular, if they could be got to indicate the opposition referred to with even approximate correctness. But I have not been able to find such expressions. The words Use Value and Exchange Value are not suitable at all, because, as we shall see, there is a Subjective Exchange Value.*

The source of the difficulty is here clearly indicated. It is the existence of certain phenomena to which Böhm-Bawerk has given the name "Subjective Exchange Value." I would, however, urge that the elevation of this phenomenon into the same rank

* Positive Theory of Capital, p. 130.

with Subjective Use and Objective Exchange Value is unnecessary, and tends to obscure the important distinction between the subjective and objective phenomena which the Austrians have labored so zealously to establish.

27. Subjective Exchange Value is not a Primary Phenomenon of Value.—First let us be entirely clear as to what is here meant by Subjective Exchange Value. Let us assume that tobacco, when I smoke it myself, has a marginal utility of 4. It may, however, happen that I can exchange the tobacco for wheat with a marginal utility of 8. Under such circumstances the actual value of the tobacco will be 8. Here 4, or the marginal utility of the tobacco when directly consumed by myself, is its *subjective use value;* while the marginal utility which I secure by exchanging the tobacco for wheat is the *subjective exchange value* of the tobacco, which in this instance is 8. Or as Böhm-Bawerk puts it, the value of the tobacco is here determined by the marginal utility of a foreign class of goods.

There are several serious defects in the reasoning employed in the discussion of this part of the subject. One noticed by Böhm-Bawerk himself is the speaking of two marginal utilities for the same commodity. This at one and the same time and to one and the same person is manifestly impossible. Again, it may well be questioned whether it is true that the value of any consumption good is in last resort determined by the marginal utility of a "for-

eign class of goods." What we really do is to exchange tobacco at 4 for wheat at 8 until the supply of tobacco is so reduced that its marginal utility has been raised to 8.

But all this aside, we fail to see that Böhm-Bawerk has anywhere justified his elevation of "Subjective Exchange Value" to the rank of a primary phenomenon of value. In the chapter in which he seeks to establish this rank for subjective exchange value the burden of the argument is devoted to an effort to show that this phenomenon is essentially different from that of objective exchange value. This we freely grant, and for the reason urged, that one is a subjective and the other an objective phenomenon. But we fail to see that he has anywhere shown that any such fundamental difference exists between subjective use value and this so-called subjective exchange value.

The difference between the direct and indirect use of a commodity may or may not be of sufficient importance to justify their recognition as subdivisions of use value, just as we recognize normal and market price as subdivisions of objective exchange value. But I fail to find any sufficient reason for elevating the indirect use or subjective exchange value to the rank of a primary phenomenon of value.

28. Use and Exchange Value versus Value and Price.—Subjective exchange value being thus eliminated as a primary phenomenon, we are, by Böhm-Bawerk's own statement, brought back to the older

and less cumbersome terms, use value and exchange value. We have now to inquire as to the expediency of including such essentially different phenomena under the common term value. Wieser writes: "It must be emphasized that the word value alters its original meaning somewhat when transferred from the subjective relations to wants to the objective relations to price." ("Natural Value," p. 51.) Why, then, I would ask, must we continue to include both phenomena under the common term value? Would not the antithesis between these two concepts be more clearly apprehended if they were always known by essentially different names, one as value, the other as price? Even though a generic term that would include both phenomena is desirable, yet why should we confound the discussion by compelling the term value to perform this function? As a matter of fact, it is much to be doubted whether anything is gained by the introduction of such a generic term.

The only attempt in the writings of the Austrian economists to justify the continuance of "value" as a generic term is found in the following passage from Böhm-Bawerk: "The two groups of phenomena to both of which *popular usage* has given the *ambiguous* name 'Value' we shall distinguish as value in the Subjective and value in the Objective sense." ("Positive Theory of Capital," p. 130.) Now, while I would be among the last to break unnecessarily with the traditions of the past, yet it may fairly be

asked, Why continue a "popular usage" that involves us in a confessed ambiguity?

This substitution of the terms value and price for the more cumbersome terms subjective use value and objective exchange value is open to but one objection. That is, the fear that we may lose sight of the distinction between value as a subjective and price as an objective phenomenon. The importance of this distinction between the subjective and objective phenomena cannot be too strongly insisted upon, but it may well be questioned whether their inclusion under the common term value does not tend to obscure this distinction. I would therefore suggest that the term value be strictly confined to the subjective phenomena, and that the term price be similarly restricted to the objective phenomena. One is the importance of the good to the individual measured in terms of marginal utility. The other involves a compromise between two such subjective estimates, and is measured in the objective terms of the quantity of money or money commodity for which the good in question will exchange. The price, of course, always has some relation to the marginal utility or value of the good; but the correspondence between value and price, as was shown in the previous chapter, is never exact save in the case of normal value and price. In general the marginal utility of the good to consumer and producer only establishes limits within which the price may vary.

CHAPTER VII.

COST AND PRICE.

THE Austrian economists hold that even in the case of *freely reproducible* goods "The law of costs is only an approximate law." And again, that "Costs are not the final but only the intermediate cause of value. In last resort they do not give it to their products, but receive it from them." ("Positive Theory of Capital," pp. 188, 189.) It will be necessary to examine these contentions with some care.

I. THE LAW OF COST AND THE PRICE OF FREELY REPRODUCIBLE GOODS.

The contention that even in the case of freely reproducible goods the law of cost is only an approximate law will require some explanation. We have seen that one of the arguments urged against the cost theory of value was that even so-called freely reproducible goods are in reality scarcity goods during all the fluctuations of their price on either side of the normal. From this Böhm-Bawerk has elsewhere argued that freely reproducible commodities are exceedingly rare, and hence the failure of the cost theory as a general theory of price.

29. The Law of Cost is here an Exact Law.—It may be asked, however, if it is entirely fair to first show that these so-called freely reproducible goods are for a large part of the time scarcity goods, and then

to employ the same argument to show that cost does not exactly determine the price of these so-called freely reproducible goods during the time that they are in reality scarcity goods. The goods are, at any given instant, either scarcity goods or freely reproducible goods. Under the former assumption we are constrained to admit that the law of cost does not give an exact determination of their price. It is, however, just as clear that during the interval that the price is at the normal point, or while these goods are freely reproducible, in any strict sense of this phrase the law of cost is not an "approximate law," but determines the price with absolute exactness.

30. Cost is here a Direct Cause of Value.—The second of the above contentions, that "Even where the law of cost holds, costs are not the final but only the intermediate cause of value," is open to equally serious criticism. The argument upon which this contention is based is in brief as follows: Under modern conditions most goods are produced in anticipation of the market, hence the determination of the utility of the goods precedes in time the determination of the disutility which men will endure in the production of the good. From this it is inferred that the causal relation is from marginal utility to cost. Some special complications are discussed in Böhm-Bawerk's chapter on "The Value of Productive Goods," but the whole argument may fairly be resolved into an attempt to establish the above causal relation.

So far as the present writer can see, this entire discussion as to the precedence of utility or disutility in the determination of price is not only without any real profit, but is actually misleading. For no matter what the seeming order of precedence may be, the fact remains that in the case of freely reproducible goods (normal price), the determination is contingent not upon one but upon two factors. It is true that the price of such good may be *measured* either in terms of marginal utility or of marginal disutility, but its *determination* depends upon the coincidence, of these two factors. (See Fig. 4, page 55.)

When, therefore, the Austrian economists tell us that in last resort the value even of freely reproducible goods is determined by marginal utility and not by cost, the question certainly seems a pertinent one: What determines the point at which this margin is fixed? The immediate answer is, of course, that it is fixed by the limitation of the supply of the commodity; increase this supply, and, other things being equal, marginal utility declines. This, however, only raises the further question, How or by what is the supply limited? In the case of scarcity goods this limitation is clearly effected by indeterminate monopoly influences; but in the case under discussion, that of freely reproducible goods, the only limitation to the supply is found in the cost of the goods, or in the marginal disutility endured in their production.

The error of the Austrian economists lies in the

assumption that in marginal utility we have a phenomenon that is incapable of further analysis, an assumption that is largely true so long as we confine ourselves to scarcity goods. But when we turn to freely reproducible goods it is clearly in order for us to inquire what determines this margin. If, for instance, in the equation $v = xy$ we assume x to be fixed, then v will vary with y. It still remains, however, for us to inquire what determines x. This limiting element in the case of freely reproducible goods is clearly the marginal disutility incident to the production of the goods.

II. THE LAW OF COST AND THE PRICE OF SCARCITY GOODS.

Under this heading I will endeavor to show that, contrary to the teachings of the Austrians, cost plays an important part even in the determination of the price of scarcity goods.

31. A Substitute always Possible.—I may employ my resources either in the purchase of rare wine or in the purchase of a diamond,—which shall it be? Manifestly that which for a given expenditure will yield the greatest utility. Let us assume that it is the rare wine. This raises the question, How under such circumstances do I determine the maximum amount which I will give for the wine? Clearly this is very seriously affected by the price at which I can secure the diamond.

In other words, there is no good so unique or rare but that some substitute for it can be found. The

difference between the freely reproducible and the rare good is not that a substitute can be found for one and not for the other, but that in the case of a freely reproducible good an entirely equivalent substitute can be found, while in the rare good the substitute is not entirely equivalent. It is nevertheless true that in determining the price of either kind of good we necessarily have in mind the cost of the next best substitute. In the case of freely reproducible goods, this cost of the substitute fixes the price of the desired goods with absolute exactness. In the case of scarcity goods, no such exact determination is possible, for we are manifestly willing to give for the desired good not only the cost of the next best substitute, but, in addition to this, an allowance for the greater utility of the desired good.*

That this is the mental process through or by which we determine what, if need be, we are willing to give for any rare good the most cursory introspection will reveal. The reason for adopting this method is likewise manifest. It lies in the indefinite and unsatisfactory character of all subjective estimates. This compels us to adopt some more tangible and objective method, even though, as in the case in hand, we seem to further complicate the problem by introducing a second subjective estimate,—the marginal utility of the proposed substitute.

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* See Clark's Philosophy of Wealth, p. 104.

32. The Substitute is in Last Resort a Freely Reproducible Good.—As this substitute is in last resort a freely reproducible commodity, its marginal utility may be measured in the terms of price. Hence to this extent the value or subjective estimate of a scarcity good finds exact objective expression. This, however, does not represent the total price of such scarcity goods, for as was seen, we are willing to pay something in addition for its superior advantages. In our endeavor to measure the difference between the marginal utility of the scarcity good and the marginal utility of its substitute, we are limited to the methods that are applicable to subjective phenomena. Hence inexact and tentative results alone are possible. The point at which the price is actually fixed depending in this case upon the relative monopoly strength of buyer and seller.

CHAPTER VIII.

DISTRIBUTION AND THE THEORIES OF UTILITY, VALUE, AND PRICE.

Not the least of the many valuable contributions of the Austrian economists is their clear exposition of the intimate relation that exists between the phenomena of value and price on the one hand and the phenomena of distribution on the other. All know that primarily the problem of distribution is to determine how the price of commodities is divided among the several parties to the transaction. Yet, despite this, we are prone to lose sight of the very intimate relation that exists between the phenomena of distribution, value, and price.

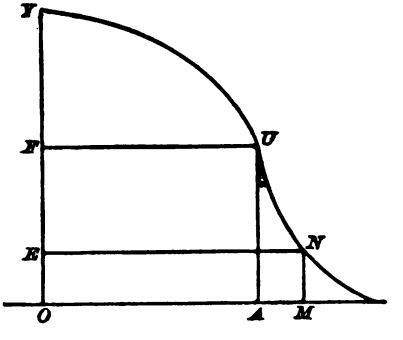
33. Society is interested in the Increase of Total Utility.—One of the first points that must be clearly recognized in this connection is the fact that society as a whole is not primarily interested either in the increase of total value, value per unit, or price, but is interested in the increase of total utility. (See page 38.) For if this is not true, then all that is necessary to increase the happiness of mankind is to decrease the supply of pleasurable commodities and so raise their marginal utility. (See Fig. 2, page 37.)

As a matter of fact, however, total value and total utility frequently increase together, and in such in-

stances society can find guidance in its economic conduct in the terms of total value. This, of course, has the great practical advantage that total value is more readily computed than total utility. For while total utility can only be determined by the summation of a long series of marginal utilities, total value is simply the product of the quantity of commodity by its final marginal utility.

34. **The Individual is interested in the Increase of Total Value.**—As a matter of fact, however, this increase of total value *parri passu* with the increase of total utility is not realized except under the assumption of free competition: hence it is not a universal or even a general experience. It might, for instance, very readily happen that an increase in the supply of a commodity beyond a certain point would cause a very rapid decline not only in the marginal utility or value per unit but also in the total value. This is shown graphically in Fig. 7, where with a supply represented by OA the total value is the area OAUF, while an increase, AM, to the supply results in the total value represented by the much smaller rectangle, OMNE; on the other hand, the total utility increases from the

FIG. 7.



area OAUY to OMNUY, or increases by the area AMNU. If, therefore, the primary interest of society is in the increase of total utility, it becomes manifest that total value is not a safe guide.

By reference to page 41 it will be seen that the above graphic illustration is the same figure that was employed in the discussion of the practice of the Dutch East India Company in destroying a portion of their crops in order to enhance the marginal utility and so the price of the balance. In other words, the interests of society and the interest of the individual may be at serious variance. The interests of society are best subserved by increasing the total utility or the supply of all useful commodities; or, rather, in approximating the condition of free competition. The interest of the individual controlling the supply of any one commodity is in the direction of increasing its value and price, and so diverting a larger share of the general social product to his own peculiar advantage. Or, stated in a more familiar way, society desires free competition in all commodities, the individual desires free competition in all commodities save the one that he supplies.

This, indeed, is the scientific basis of Proudhon's attack upon existing conditions and of his claim that only by a socialization of all industrial operations could this source of evil be eliminated. Our present interest, however, is not in the equity of the case, but to show the very intimate relation that exists between the phenomena of utility, value, and price on the

one hand and the phenomena of distribution on the other.

35. Disadvantages of the Orthodox Attitude.— The Austrians were singularly happy in their exposition of this part of the subject, and rightly insisted that the orthodox economists were at serious fault. Wieser writes: "The classical political economy really examines only the value of products, or, more exactly, of produced consumption goods. So far as factors of production are concerned, it looks upon them, on the one side, as sources of income (rent, interest, wages, and perhaps also undertaker's income); on the other side, as the elements which go to form the cost of production, and are considered to decide principally the value of the products." *

The objection here implied to the older treatment of distribution is largely based upon the antagonism of the Austrian economists to the classical theory of value. This is shown in the concluding lines of the paragraph just quoted. The Austrian economists have, therefore, endeavored to treat the problem of distribution in a way that is more in touch with their own theory of value. The fundamental question with them is not to determine the share of the social product that accrues to the several *factors* of production, but instead to determine the share that accrues to the several productive goods which enter

* Natural Value, p. 71.

into the complementary group that is necessary to the creation of the consumption good.

36. Advantages and Disadvantages of the Austrian Attitude.—The difference in method may not at first sight seem important, and it may well be that in last resort they might be made to yield the same result. It is nevertheless true that the latter method establishes a much more intimate connection between the theory of value and the theory of distribution. This has the great advantage that it gives a unity or coherence to economic theory as a whole, which seemed sadly lacking under the older method of treating the problem of distribution. But while the newer method undoubtedly enjoys this great advantage, yet its employment is attended with a corresponding disadvantage. The Austrians have labored to show that freely reproducible goods are rather the exception than the rule; and so long as we confine ourselves to the consideration of concrete commodities much may be said in favor of this contention. Once persuaded of this, we are apt to dismiss the phenomena of normal value as of little moment in any discussion of distribution, when as a matter of fact normal surpluses are of primary importance in that discussion. We have already referred to this in the Introduction, but must defer its full explication to a much later chapter. (See Sections 113 to 115.)

In the present volume we will endeavor not to lose sight either of the intimate relation that subsists be-

tween the phenomena of value and distribution or of the important part played by the several factors of production,—land, entrepreneur, capital, and labor. In other words, starting from the phenomenon of price as the concrete fact presented for analysis, we shall endeavor to formulate the laws by which the several forms of surplus, rent, profit, interest on capital, and gain of labor are determined.

PART II.

DISTRIBUTION.

BOOK I.—RENT.

CHAPTER I.

THE RENT OF LAND.

THE earliest writers upon economic questions included all payments to a landlord under the term rent. In this, of course, they simply followed the practice of every-day life. That rent so defined is a complex return they probably realized, for the most cursory examination of this return reveals not only a payment for the use of the land itself but also an amount that is in reality interest on the money invested in permanent improvements. Despite this, however, the pre-Smithian economists continued to employ the term rent in the above described way to the confusion of their own minds as well as to the confusion of their readers.

I. FUNDAMENTAL PROPOSITIONS.

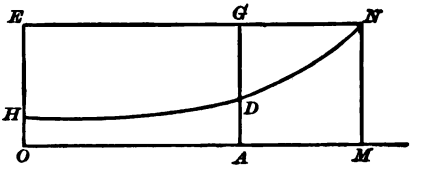
37. An Agrarian Doctrine.—With the rapid development of England's manufacturing interests in the last half of the eighteenth century conditions were developed that compelled an analysis of the complex return to which laymen had given the name

rent. Those who held that the future greatness of England depended upon the development of her manufacturing interests saw that these interests were very seriously affected by the rate of wages, and that this again, under the prevailing standard of life, depended very largely upon the price of food. From this it was an easy step to the conclusion that the high rents secured by the landlords were a serious impediment to the growth of the manufacturing interests, and so to the future greatness of England. This, of course, put the agrarians upon the defensive, and the defence which they set up was that high rents do not in any way affect the price of corn, and so do not affect the rate of wages.

38. Rent does not enter into the Determination of Price.—In support of this contention it was urged that the price of wheat must always be high enough to pay the cost of production on the poorest farm that is maintained in cultivation. Rent, it was said, is the surplus secured by those who have more efficient farms (farms that are more fertile or that are nearer the market): hence rent does not determine price, but is determined by price. Rent so defined is, of course, an entirely different concept from the rent of every-day language. It clearly excluded all interests on the cost of improvements, and was supposed to include only payments for "the original and indestructible powers of the land." The following graphic illustration may serve to make the thought a little clearer.

39. **Diagram of Rent.**—As the number of farms growing wheat is very large, and as it is possible that no two are of exactly equal efficiency in the production of wheat, we can conceive of them as arranged in a series of increasing difficulty or non-efficiency in production. In Fig. 8 OH represents the cost or disutility of production on the most efficient farm, while MN represents the cost or disutility on the least efficient farm, that must be maintained in cultivation in order to insure a given supply of corn. Now, it was the contention of those who sought to defend the agrarian interests that the price of wheat must equal the cost, MN, or the supply of corn would decrease; for the marginal producer, or he who produces at the greatest cost, will not continue to produce if he does not at least secure an amount that will cover his cost. In other words, the price of wheat is determined quite independently of the rent of the more efficient farms here represented by HE and DG. Not only so, but the price must first be fixed by the cost on the poorest farm before we can determine the rent of the better farms. Hence, rent is determined by price and not price by rent. At MN cost and price are equal. This is the case of a no-rent farm.

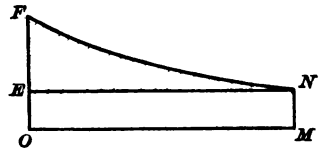
Fig. 8.



The diagram usually employed to illustrate the

doctrine of rent is given in Fig. 9. It brings out with great clearness the fact that the rent of a given piece of land is the difference in its productivity and the productivity of the poorest land in the cultivation for the production of the same commodity. If the productivity of the various farms are represented by ordinates, a line drawn through their upper extremities would descend from the productivity of the best land, represented by OF, to the productivity of the poorest land, represented by MN. The total rent arising from the production of this commodity is the area FNE, which corresponds with the area HNE in Fig. 8. In the case of intensive cultivation the area FNE or HNE represents the rent of a particular farm. Fig. 8 has the advantage of bringing out in a clear and distinct way the fundamental concept that underlies the doctrine of rent, —to wit, Price is determined by the greatest or marginal cost.

FIG. 9.



From this it is clear that the advocates of this doctrine of rent were right when they claimed that the causal relation was not from rent to price but from price to rent. In other words as here defined, rent does not enter into the determination of the price of wheat, and so does not interfere with the manufacturing interests by raising the cost of living and so the rate of wages. In conclusion, I would say that there

is absolutely no hope for any firm grasp of the most elementary problems of economic theory until this fundamental concept, that rent is a surplus which does not enter into the determination of price, has been made part of our intellectual furnishing. Again, it must ever be borne in mind that this proposition rests upon the further contention that in the case of freely reproducible goods price is determined by the greatest or marginal cost of production. It may be well to preface our review of the writers who have contributed to this part of economic literature by a brief enumeration of the several propositions that are usually regarded as essential parts of the doctrine of rent.

40. Rent due to Difference in Fertility and Distance from Market.—Rent is due to differences in the efficiency of the various farms, or, as it is usually stated, to differences in fertility and distance from market. Lying back of this proposition we find the assumption that with the increase in population men are forced to employ less and less fertile land. It has been objected to this that it does not correspond to the actual order in which land is brought into cultivation. In new countries the best land frequently remains uncultivated for lack of sufficient capital to drain it, etc. A slight change in the ordinary statement of the doctrine of rent will meet this difficulty. For, capital and technical skill remaining the same, men will always cultivate the more efficient land first.

41. **Law of Diminishing Returns.**—It was not long before it was seen that in the extension of cultivation men might either have recourse to new and less efficient land or they might expend more capital and labor upon the land already in cultivation. At bottom these amount to one and the same thing. This method of intensive cultivation, however, suggests the possibility of an increase in cultivation by differential increments, a concept that has some important theoretical advantages, and is regarded by some modern economists as the typical case of rent. In either case an addition of capital and labor may, up to a certain point, yield an increasing return, but after reaching that point a given expenditure of capital and labor yields a diminishing return.

42. **Effect of Improvements.**—It was also seen that this tendency to a diminished return and the rent consequent therefrom might be offset by all causes, such as improvements in transportation, etc., that tend to reduce the difference in cost between the more efficient and the least efficient or marginal land. It was further seen that the influences that tend to reduce this difference in cost are more generally realized in manufactures than in agriculture.

It appears, then, that in our review of those writers who have been active in the promulgation of the doctrine of rent we should look for some recognition of the following concepts:

Differences in fertility and access to market, or, better, differences in efficiency of land.

The law of diminishing return and the effect of improvements.

Greatest cost determines price and price determines rent. This last contention, that price determines rent, is, in brief, the doctrine of rent.

II. HISTORICAL DEVELOPMENT OF THE DOCTRINE OF RENT.

43. Adam Smith.—It is not difficult to find isolated passages in "The Wealth of Nations" that seem to justify the claim that the doctrine of rent, as applied to land, found clear and explicit statement at the hands of Adam Smith. In the first place, he clearly recognizes not only that difference in fertility and distance from the market are sources of rent, but that these are offset by increased facilities in transportation. (See Book I. Chap. XI. Part I.)

Again, he writes: "Rent, it is to be observed, therefore, enters into the composition of the price of commodities in a different way from wages and profit. High or low wages and profit are the cause of high or low price; high or low rent is the effect of it. It is because high or low wages and profit must be paid, in order to bring a particular commodity to market, that its price is high or low; but it is because its price is high or low, a great deal more, or very little more, or no more, than what is sufficient to pay those wages and profit, that it affords a high rent, a low rent, or no rent at all." ("The Wealth of Nations," Book I. Chap. XI.)

But while Smith seems to see quite clearly that

rent does not enter into the determination of price, he is not so clear on the proposition upon which in last resort the law of rent is based,—namely, that price is determined by the greatest or marginal cost of production. This is shown in the following passage:

"As the price both of the precious metals and of the precious stones is regulated all over the world by their price at the most fertile mine in it, the rent which a mine of either can afford to its proprietor is in proportion not to its absolute, but to what may be called its relative fertility, or to its superiority over other mines of the same kind." ("The Wealth of Nations," Book I. Chap. XI. Part II.)

While he here recognizes that the rent of such mines is due to "their superiority over other mines of the same kind," he confounds the argument by saying that "the price of these commodities is regulated all over the world by their price at the *most fertile mines in it.*"

44. Criticism of Smith.—Passages like the above led those who immediately followed Smith to conclude that he did not have a firm grasp upon the doctrine of rent.

Ricardo writes: "Adam Smith sometimes speaks of rent in the strict sense to which I am desirous of confining it, but more often in the popular sense in which the term is usually employed. . . . He also speaks of the rent of coal-mines and of stone-quarries, to which the same observation applies,—that the

compensation given for the mine or quarry is paid for the value of the coal or stone which can be removed from them, and has no connection with the original and indestructible powers of the land." *

Malthus writes: "Adam Smith, though in some parts of the eleventh chapter of his first book he contemplates rent quite in its true light, and has interspersed through his work more just observations on the subject than any other writer, he has not explained the most essential cause of the high price of raw produce with sufficient distinctness, though he often touches upon it; and by applying occasionally the term monopoly to the rent of land, without stopping to mark its more radical peculiarities, he leaves the reader without a definite impression of the real difference between the cause of the high price of the necessaries of life and of monopolized commodities." †

45. **Anderson.**—The first to give us a full and fairly complete statement of the doctrine of rent as applied to land was Dr. James Anderson, who in 1777 published a tract entitled "An Inquiry into the Nature of the Corn Laws." In this he writes: ‡ "I foresee here a popular objection. It will be said that the price to the farmer is so high only on account of the high rents and avaricious extortions of

* Ricardo's Principles of Political Economy, Bohn edition, p. 45.

† An Inquiry into the Nature and Progress of Rent, p. 3.

‡ This is taken from the abstract in Overstone's reprint of rare tracts.

proprietors. 'Lower (say they) your rents, and the farmer will be able to afford his grain cheaper to the consumers.' But if the avarice alone of the proprietors was the cause of the dearth of corn, whence comes it, I may ask, that the price of grain is always higher on the west than on the east coast of Scotland? Are the proprietors in the Lothians more tender-hearted and less avaricious than those of Clyddesdale? The truth is, nothing can be more groundless than these clamours against men of landed property. There is no doubt but that they, as well as every other class of men, will be willing to augment their revenue as much as they can, and therefore will always accept of as high a rent for their land as is offered to them. Would merchants or manufacturers do likewise? Would either the one or the other of these refuse, for the goods he offers for sale in a fair open way, as high a price as the purchaser is inclined to give? If they would not, it is surely with a bad grace that they blame gentlemen for accepting such a rent for their land as farmers, who are supposed always to understand the value of it, shall choose to offer them. . . .

"*It is not, however, the rent of the land that determines the price of its produce, but it is the price of that produce which determines the rent of the land.*

"In every country there is a variety of soils, differing considerably from one another in point of fertility. These we shall at present suppose arranged into different classes, which we shall denote

by the letters A, B, C, D, E, F, etc.; the class A comprehending the soils of the greatest fertility, and the other letters expressing different classes of soils, gradually decreasing in fertility as you recede from the first. Now, as the expense of cultivating the least fertile soil is as great as or greater than that of the most fertile field, it necessarily follows that if an equal quantity of corn, the produce of each field, can be sold at the same price, the profit on cultivating the most fertile soil must be much greater than that of cultivating the others, and as this continues to decrease as the sterility increases, *it must happen that the expense of cultivating some of the inferior classes will equal the value of the whole produce.*" This Anderson assumes to be the case in class F, and concludes that "the utmost avarice of the proprietor cannot in this case extort a rent from this class." Farmers in the other class could of course afford to pay a rent. "Nor would the proprietors of these fields find any difficulty in obtaining these rents; because farmers, finding they could live equally well upon such soils, though paying these rents, as they could upon the fields without any rent at all, would be equally willing to take the one as the other."

"Let us now suppose that the gentlemen of Clyddesdale, from an extraordinary exertion of patriotism and an inordinate desire to encourage manufactures, should resolve to lower their rents, so as to demand nothing from those who possessed the fields

E, as well as those of the class F, and should allow the rents of all the others to sink in proportion; would the prices of grain fall in consequence of this? By no means. The inhabitants are still in need of the whole produce of the field F as before, and are under the necessity of paying the farmer of these fields such a price as to enable him to cultivate them. He must, therefore, still receive fourteen shillings per boll as formerly. And as the grain from the fields E D C B and A are at least equally good, the occupiers of such of these fields would receive the same price for their produce. The only consequence, then, that would result from this quixotic scheme would be the enriching one class of farmers at the expense of their proprietors, without producing the smallest benefit to the consumers of grain,—perhaps the reverse, as the industry of these farmers might be slackened by this measure.

"If, on the other hand, by any political arrangement, the price of oatmeal should be then reduced from fourteen to thirteen shillings per boll, it would necessarily follow that all the fields of the class F would be abandoned by the plough, and the rents of the others would fall, of course; but with that fall of rent the quantity of grain produced would be diminished, and the inhabitants would be reduced to the necessity of depending on others for their daily bread. Thus it appears that rents are not at all arbitrary, but depend on the market price of grain; which, in its turn, depends upon the effective de-

mand that is for it, and the fertility of the soil in the district where it is raised: *so that the lowering of rents alone could never have the effect of rendering the grain cheaper.*" We here have a clear recognition of the two essential propositions that price is determined by the greatest or marginal cost, and that price determines rent instead of being determined by rent. So, too, in this first elaboration of the doctrine of rent, we find it set up as the defence of the agrarian interest against the growing demands of the manufacturing interest.

Despite the clear enunciation in Anderson's tract of fundamental concepts involved in the doctrine of rent, nearly half a century elapsed before this doctrine became an essential part of economic theory. It was not, indeed, until 1815 that Malthus, in "An Inquiry into the Nature and Progress of Rent," and Sir Edward West, in his essay on "The Application of Capital to Land," developed quite independently of each other and of Anderson the modern doctrine of the rent of land.

46. **Malthus.**—This writer held that "The reason why the real price of corn is higher and continually rising in countries which are already rich, and still advancing in prosperity and population, is to be found in the necessity of resorting constantly to poorer land." (Page 44.) "The price of produce in every progressive country must be just about equal to the cost of production on land of the poorest quality in use; or to the cost of raising additional produce

on old land, which yields only the usual return of agriculture stock, with little or no rent." (Page 35.) "There is no just reason to believe that if landlords were to give the whole of their rents to their tenants corn would be more plentiful and cheaper." (Page 57.) *

Differences in fertility and distance from market are here clearly recognized as sources of rent. So, too, the propositions that greatest cost determines price and price determines rent. Again, the laws of Increasing and Diminishing Return are clearly apprehended by Malthus. For he writes: "Many of the questions, both in Morals and Politics, seem to be of the nature of the problem de maximis and minimis in Fluxions; in which there is always a point where a certain effect is the greatest, while on either side of this point it gradually diminishes." ("Tract on the Effects of the Corn Laws," p. 32.)

47. West.—Sir Edward West's formulation of the doctrine of rent differs but little from that just examined.

West writes: "When in the progress of improvement new land is brought into cultivation recourse is necessarily had to poor land, or to that at least which is second in quality to what is already cultivated." (Page 9.)

Again, "The additional work bestowed on land must be expended either in bringing fresh land into

* An Inquiry into the Nature and Progress of Rent.

cultivation or in cultivating more highly that already in tillage. In every country the gradations between the richest land and the poorest must be innumerable. The richest land, or that most conveniently situated for a market, will, of course, be cultivated first." (Page 9.)

"It is the diminishing rate of return upon additional portions of capital bestowed on land that regulates, and almost solely causes rent." (Page 49.) "The corn that is raised at the least expense will, of course, sell for the same price as that raised at the greatest, and consequently the price of all corn is raised by the increased demand. But the farmer gets only the common profits of stock in its growth, which is afforded in that corn which is raised at the greatest expense; all the additional profit, therefore, on that part of the produce which is raised at a less expense goes to the landlord in the shape of rent." (Page 50.)

It is manifest that West, like Malthus, recognizes all of the fundamental conceptions involved in the modern doctrine of rent as applied to land. Difference in fertility and distance from market, the law of Diminishing Returns, and the effect of improvements are clearly set forth, while the propositions that price is determined by the greatest cost and that rent is determined by price are clearly enunciated.

48. **Ricardo.**—Ricardo, whose "Principles" appeared shortly after the above papers by Malthus and West, recognized the importance of their con-

clusions, and hastened to embody them in his system of distribution. In determining the cause of rent he follows the above writers very closely: "The most fertile and most favorably situated land will be first cultivated." (Page 49.) "If, then, good land existed in a quantity much more abundant than the production of food for an increasing population required, or if capital could be indefinitely employed without a diminished return on the old land, there could be no rise of rent." (Page 49.)

Again, he writes: "Raw material enters into the composition of most commodities, but the value of that raw material, as well as corn, is regulated by the productiveness of the portion of capital last employed on the land and paying no rent; and therefore rent is not a component part of the price of commodities." (Page 55.)

He also gives us the following statement, in which the conditions under which rent arises are couched in the most general terms: "Rent is always the difference between the produce obtained by the employment of two equal quantities of capital and labor."

Ricardo added but little to the doctrine of rent as formulated by Malthus and West; he, however, embodied it in a scheme of distribution that was accepted by English economists for many years after the publication of his "Principles," and so from this time on we hear only of Ricardo's law of rent, while the belief that in the cost of production we have the

true and only measure of value became even more firmly riveted upon the body of economic theory.

49. Criticisms of Ricardo.—For more than half a century after the publication of Ricardo's "Principles" English literature was well-nigh barren of any valuable contribution to the doctrine of rent. Specific statements of Ricardo were objected to, and the objections sometimes sustained. For instance, his contention that the most fertile and most favorably situated land will be first cultivated does not agree with the facts as we find them in the settling of a new country, for men are frequently forced to cultivate the less fertile land of the hill-side until capital has accumulated to allow them to drain the more fertile bottom lands.

Again, he writes: "Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil." (Page 44.) This contention has been attacked on the ground that the only original and indestructible powers of the soil are the area on which to expose soil and plants to air, water, and sunshine, and it is agreed that in this sense land is so abundant that it could have no value. (See Clark, *Quarterly Journal of Economics*, 1891.)

Ricardo's phrase, "the original and indestructible powers of the soil," is certainly far from happy; it is, however, capable of a more liberal interpretation than that given in this criticism. What Ricardo intended to say was that before rent can arise not

only the cost of production must be met, but also the cost of maintaining the land unimpaired in its fertility. Where this last deduction is not made the payment, as in the case of mines, is a royalty and not a rent. It is, indeed, in this very connection that Ricardo employed the terms to which Clark objects. He writes: "Compensation given for the mine or quarry is paid for the value of the coal or stone which can be removed from them, and has no connection with the original and indestructible powers of the land."

Even the fundamental condition of a rent, that it does not enter into the determination of price but is determined by price, has not escaped attack. Indeed, so able a defender of the Ricardian faith as J. S. Mill has yielded to the attack at this point. He writes: "Rent is not an element in the cost of production of the commodity which yields it; except in the case (rather conceivable than actually existing) in which it results from and represents a scarcity value. But when land capable of yielding rent in agriculture is applied to some other purpose, the rent which it would have yielded is an element in the cost of production of the commodity which it is employed to produce." (Book III. Chap. VI.)

This is a practical admission of the claim of Ricardo's critics that there is no such thing as a no-rent land. If this is true, it follows that rent does enter into the determination of price. In other words, the law of rent is completely nullified. In Book II.,

Chapter II., this statement of Mill, and likewise the contention that there is no no-rent land, will be examined at some length.

For the present I would urge that we must either dismiss the doctrine of rent as part of the antiquated lumber of our intellectual furnishing or hold fast to the proposition that rent is that surplus which does not enter into the determination of price, but is determined by price.

CHAPTER II.

THE GENERAL DOCTRINE OF RENT.

I. THE DOCTRINE IN ENGLISH ECONOMICS.

THE earlier English economists restricted themselves almost entirely to a discussion of the doctrine of rent as applied to land. *And yet from the very inception of the doctrine men recognized that its primary and essential condition is that it does not enter into the determination of price but is determined by price. From this it is not far to the further conclusion that wherever such a surplus arises, whether in connection with land, labor, capital, or entrepreneur, we have a rent of the corresponding factor of production.* And yet, despite the ease with which this further step in the argument may be taken, it was long delayed among English economists. Here and there we find an occasional reference to this general doctrine, but it was not until the last quarter of the present century that it found any general acceptance.

50. Whately on the General Doctrine of Rent.— This writer took occasion to declare that the rent of land is only one species of an extensive genus, and complained that English economists have regarded it as a genus by itself, and have either omitted its cog-

nate species from all consideration or have included them under genera to which they do not properly belong. But beyond entering this general complaint the Archbishop makes no further contribution to the literature of the subject.

51. J. S. Mill on the General Doctrine of Rent.—Mill writes: "Cases of extra profit analogous to rent are more frequent in the transactions of industry than is sometimes supposed. Take the case, for example, of a patent or exclusive privilege for the use of a process by which cost of production is lessened. If the value of the product continues to be regulated by what it costs to those who are obliged to persist in the old process, the patentee will make an extra profit equal to the advantage which his process possesses over theirs. This extra profit is essentially similar to rent, and sometimes even assumes the form of it; the patentee allowing to other producers the use of his privilege in consideration of an annual payment. . . .

"The extra gains which any producer or dealer obtains through superior talents for business, or superior business arrangements, are very much of a similar kind. If all his competitors had the same advantages, and used them, the benefit would be transferred to their customers, through the diminished value of the article: he only retains it for himself because he is able to bring his commodity to market at a lower cost, while its value is determined by a higher. All advantages, in fact, which one competi-

tor has over another, whether natural or acquired, whether personal or the result of social arrangements, bring the commodity, so far, into the Third Class, and assimilate the possessor of the advantage to a receiver of rent." (Appleton edition, pp. 585, 586.)

While this is far from a happy statement of the case, yet it clearly recognizes the general character of the rent function.

52. **Walker on the Rent of Entrepreneur.**—That Walker has shown that the entrepreneur performs as distinct and important a service as capital or labor will hardly be questioned; but what interests us most in this connection is his claim that the return secured by the entrepreneur follows the law of rent. He writes: "I shall now undertake to show that profits, the remuneration of the entrepreneur or employer, partake largely of the nature of rent, being a species of the same genus. So far as this is the case, profits do not form a part of the price of the products of industry." ("Political Economy," 1888, p. 236.) As we shall have occasion to review this writer's contribution to this part of economic theory at some length in another chapter (see page 135), a very brief notice at this point will be sufficient. In conclusion, we can only express regret that he did not follow his argument to its legitimate conclusion, and call the return—which confessedly follows the law of rent—the rent of the entrepreneur.

53. Marshall on the Rent of Capital.—This rent, though now and again incidentally noticed in English literature, receives its first full enunciation at the hands of Professor Marshall. He writes: "Let us suppose, then, that an exceptional demand for a certain kind of textile fabric is caused by, say, a sudden movement of the fashions. The special machinery required for making that fabric will yield for the time an income which bears no direct relation to the expenses of making the machinery; but is rather a high Quasi-rent governed by the price that can be got for the produce, and consisting of the excess of the aggregate price of that produce over the direct outlay (including wear and tear) incurred in its production. . . .

"Meanwhile such of the old machinery as is in good repair may perhaps be kept at work; but the income which it earns will bear no direct relation to its own expenses of production; it will be the small excess of the selling value of the produce made by it over the wear and tear and other direct outlay involved; this income will be a Quasi-rent,* the value of which will be determined by the price of

* Marshall accents the greater permanence of land rent, and so calls the differential earnings of capital "Quasi-rent." Many German economists, on the other hand, regard every differential gain as an unqualified rent without regard to its duration. As a matter of fact, the rent of land is only a little more permanent, as the recent reduction in rents, because of improvements in transportation, abundantly testify.

the produce, and play no direct part in determining that price. . . .

"Similar illustrations might be taken from any other branch of business. Each branch has special features of its own; but with proper modifications in detail the same general principle applies to all. In every case the net-income derived from the investment of capital, when once that investment has been made, is a Quasi-rent." (Marshall's "Principles of Economics," pp. 469–471.)

54. Clark and Hobson on the General Doctrine of Rent.—In the magazine literature of more recent years there is a growing tendency to regard rent as a general function, or as a surplus that may be realized by any and all factors of production. Indeed, there is some danger that its application will be extended beyond its legitimate limits. This is notably the case with an article by J. B. Clark in the *Quarterly Journal of Economics*, 1891, under the caption of "Distribution determined by a Law of Rent." In this Clark seeks to show that even the interest on capital and the wages of labor follow the law of rent. That both capital and labor may secure a differential return or a rent is, of course, admitted. Clark, however, seems to hold that the minimum rate of interest or the earnings of capital as an abstract fund—to use his own phrase—is a differential gain or a rent. As his completed work will shortly appear, criticism at this time would hardly be in order. In the same volume of the *Quarterly Journal of*

Economics there is an article by J. H. Hobson on "The Law of the Three Rents," which seems likewise to give a very wide range to the doctrine of rent. This will be examined in a later chapter.

II. THE DOCTRINE IN GERMAN ECONOMICS.

55. Busch on the Rent of Labor.—This writer informs us that "not only special talent and ability have this distinction, but even the laborer who is presumed to have mere bodily strength attains to a skill which gives him a gain in the same way as talent. Nor can this be regarded as a return for the time during which he was acquiring this skill, because during that time he received all his skill could command or was paid for his total effect. So the old experienced seaman does not work harder than the new beginner, and yet he gets higher wages, because he knows the parts of the ship better, and so can more quickly, surely, and properly obey the commands of the officers. So in agriculture the experienced ploughman is better paid than the inexperienced. So, too, in stores the more skilful packer is paid better than the unskilled, though both use equal strength, and also in some positions greater honesty will command higher pay. If it was worth the trouble to be very exact in the matter, one could even contest whether wages-gain (Arbeiterslohn-Gewinn) is rightly so characterized, for it can, at least in part, be regarded as a rent of the mere skill of labor, for though the rent is so insignificant, yet the

incapable laborers cannot draw it." We here have a clear recognition of a rent of labor, and that as early as 1800.*

56. Hufeland on the General Doctrine of Rent.† —Writing some seven years later, Hufeland quotes with approval Busch's remarks about the rent of labor. He, however, goes much farther than Busch, and attempts to show that the doctrine of rent is applicable to all the factors of production.

(*a*) RENT OF LAND.—In his discussion of this rent Hufeland clearly recognizes that it depends upon differences in fertility and distance from the market. He also sees that "the ground-rent depends, much more than hitherto considered gains, upon the market price of the product. It does not contain, like wages and capital, some principle for the determination of the price, whereby these latter can be the cause of the price, for out of these, as is well known, the price of corn is formed, since they in their repair must receive a definite amount, and may even, upon this amount, obtain a proportional gain before the rent is paid. The ground-rent is entirely wanting in this fundamental determining quantity; it can only wait for what remains for it. The laborer and capitalist can first obtain not only their cost, but also their share of the gain, because when the gain is not

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* John George Busch, "Abhandlung von dem Geldumlauf," second edition, 1800.

† "Neue Grundlegung der Staatswirthskunst," 1807.

high enough they can go elsewhere to find employment, but the landlord must wait for his rent, because at best he can only allow his land to lie idle. Therefore, out of the market price comes first the wages and then the capital gain with some certainty, and the ground-rent is the least assured. If the market price sinks, the landlord must be the first to lose."

(*b*) RENT OF CAPITAL.—In his discussion of this rent Hufeland is not very happy. He nowhere succeeds in showing a gain due to a differential *advantage* in production. In other words, he only gives us a formal and not an actual recognition of this rent.

(*c*) RENT OF LABOR.—Hufeland quotes the preceding paragraph from Busch, but does not make any substantial addition to this part of the discussion.

(*d*) RENT OF UNTERNEHMER.—In his treatment of this rent he writes (paragraph 72): "He who applies or employs capital may be the owner of the capital, or he may employ the capital of others.

"He who employs the capital is the Unternehmer, the owner of the capital is the capitalist, and the return which the Unternehmer receives is called the 'Unternehmungsgewinn.'

"The 'Unternehmungsgewinn' is the surplus after abstracting—

"1. Wages with gain.

"2. Repair of capital.

"3. Repair for risk of capital.

"4. 'Capitalgewinn' or interest.

"The balance comes to the Unternehmer, and is partly a gain which he draws because of the greater risk which he incurs, and partly a *rent for his talent or other mental qualities.* And so it is in the class of successful Unternehmers that the greatest wealth is gained. The rent for the talent and other qualities has no limit, because men of this sort are scarce."

Again, paragraph 76, "There are certain natural conditions without which production is impossible. These are derived from nature alone, and are more or less rare. The possessor of them can deny their use to others unless they pay him for it. But what he receives is no repair or indemnification for any service he has rendered, because he has rendered none; it is pure gain, pure rent.

"To these natural sources of wealth belong two classes:

"1. Human talent, capability, qualities of mind, heart, and character.

"2. The land or soil."

He then goes on to remark "that hitherto only the last sort has been so regarded, and that now for the first time, through the addition of the first sort, the conception of the matter has been made more general."

He then refers to Say as having some foreshadowing of this, and marvels that he did not recognize the general concept.

It is true, Hufeland does not enter into that detailed discussion of the function and qualifications of

the Unternehmer which we find in later writers, but that the Unternehmer receives a return because of his differential advantage, or that with equal pain, in the effort of production, there was an unequal return, and so a rent, an unearned increment, he most clearly and explicitly recognized.

It is also interesting to note that in his discussion of the subject he proceeds in the following order:

1. Rent of Fixed Capital.
2. Rent of Skill and Talent.
3. Rent of Land.

Or so clearly did he recognize the breadth and generality of the doctrine of rent that he discusses all other applications of the doctrine before proceeding to the consideration of land-rent.

57. Mangoldt on the General Doctrine of Rent.— From 1807 to 1855 the general doctrine of rent had, in German economics, a somewhat *varied career*. Some writers, like Rau, who were strongly impressed by Ricardian economics, failed entirely to see any general doctrine of rent. Others, like Herman and Nebenius, had more or less of a grasp of the idea that rent is a general function common to all factors of production. It was not, however, until Mangoldt* published in 1855 that we find a full and complete exposition of the doctrine as applied to all factors of production.

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* "Die Lehre von Unternehmungsgewinn," 1855.

(*a*) RENT OF LAND.—While Mangoldt recognizes the part played by difference in fertility and distance from market, etc., he does not elaborate this part of the discussion or add anything to that which has already been well said by others. He seems to think that, so far as this rent is concerned, the evidence is all in and the case closed.

(*b*) RENT OF CAPITAL.—In his discussion of the rent of capital we have a distinct advance upon all previous contributions. For while the formal recognition of this rent which we found in Hufeland recurs again and again in German economics, it is always equated to some *disadvantage* in production, to risk, etc. Here for the first time it is equated to a differential *advantage* in production, or to the superiority of certain forms of capital in the production of a given commodity. In this connection Mangoldt writes: "This interest-rent is not drawn by all forms of capital equally, any more than wages-rent is drawn by all who are capable of working. It is only the surplus which a certain form of capital draws in excess of the general rate of interest. . . . The reason why a certain form of capital yields this extra return is either the scarcity of its kind or the scarcity of its extent or amount.

"If capital of a certain kind is either unconditionally necessary to the production of a commodity, or can only be replaced by a less satisfactory substitute, it begins to give an interest-rent as soon as the demand for the commodity for whose production it

serves is so strong that the supply at existing prices is not sufficient to satisfy it."

(*c*) RENT OF LABOR.—In his discussion of the rent of labor Mangoldt is not always clear that it is a differential gain. He does, however, clearly see that it is due to some advantage in production which certain laborers possess over others. He writes, "When we speak of a rent of personal ability, or of a wages-rent, we do not mean the surplus of the product of labor over the absolutely necessary measure, nor a surplus over a pretended natural measure of wages. Wages-rent is to us an extra amount which certain performances obtain beyond the measure belonging to them when their quantity and quality is compared with other performances. Hence it results that not labor in general, but only certain sorts of labor, draw a rent."

He finds that this rent is due to two causes: First. Legal and other external restriction which prevent the free movement of laborers from one trade or occupation to another. Second. Differences in natural or acquired ability. With regard to the latter he writes: "When we turn to the inner reasons of a wages-rent, that is, to the real actual want of persons possessed of the required ability, we find that the lower the order of the ability demanded in a certain performance, and so the more widely diffused this ability is, the less the wages-rent. Hence, as a rule, the mere physical labor can reckon less upon a rent than the more intellectual. Yet this may be

otherwise when in any nation the intellectual development is at the expense of the physical, as usually happens in periods of decline. The greater the outlay in time, strength, or money in the acquisition of skill or ability the easier and more certainly is a wage-rent obtained. This is the reason why pre-eminent gifts or education almost always receive very high pay. The rent in this case is due less to the scarcity of the improved natural talents than to the education. An extreme extension of the division of labor results frequently, though only temporarily, in a wages-rent, because it develops one-sided skill, and so makes difficult the transition from one occupation to another. In industries that are subjected to great variations there occurs not infrequently a wages-rent, because the sudden increase in demand compels the employment of those who are unskilled."

(*d*) RENT OF UNTERNEHMER.—In this connection Mangoldt writes: "The Unternehmer's rent does not cause an increase in the price of products; . . . it is true the Unternehmer's rent, like all other rents, can arise only when the price of the product is higher than the cost, but this is not the consequence of the Unternehmer's rent. It depends rather upon the scarcity of certain productive elements, and whereas in other rents the owners of the rare element, be they undertakers or not, draw the advantage, here it comes only to the Unternehmer. That it is the Unternehmer, in whose favor such a scarcity

appears, does not in any way alter its importance or effect."

From this he is led to conclude that it would not only be unjust, but also impractical, useless, and unwise to attempt to limit the Unternehmer's rent, arising from extraordinary personal ability, "because, in the first place, it would not decrease prices, and in the second, it would render the Unternehmer averse to making an increased effort.

"There only remains, therefore, for such interference those cases where the natural relations grant to certain Unternehmers a lasting monopoly. Whether such cases really exist is to be considered with great carefulness. If the answer is in the affirmative, then of all measures in the public interest those are to be selected which interfere the least with the efficiency of the Unternehmer. For upon this the cheapening of production largely depends. Only in the most extreme cases can the abolishing of the Unternehmer's mode of conducting business be justified."

It is impossible to condense a volume such as this within the limits of two or three pages. It is, however, clear that we here have an explicit recognition of rent as a general function, common to all the factors of production. So, too, the functions of the Unternehmer are recognized; that he receives a return which is essentially of the nature of a rent; which, to use the author's own words, should be called the rent of the Unternehmer.

58. Schäffle on the General Doctrine of Rent.—Writing in 1869, this author refers to Mangoldt as agreeing with him in the contention that rent is a general function.

Schäffle writes: "I have especially to thank Mangoldt, who in his 'Grundriss' in the most conscientious way cites my views and entirely agrees with me in his treatment of the doctrine of rent." Mangoldt in a later publication * resented the implied claim to priority which Schäffle here sets up. Mangoldt first refers to his own earlier publication (1855), which Schäffle had ignored. He then adds: "I repeat that I only call attention to this that I may not rest under any false suspicion. Not that I may obtain thereby any special merit or credit. I hold any contention about the priority of a thought which, so to speak, is in the air and which is simply the consequence of the already determined direction of scientific development, to be very idle. I am also not disposed to maintain that the thought, either in part or whole, was not promulgated by some one before me, for who can at this day have a complete knowledge of the literature of economics?" The difference in the spirit of the two men is here sufficiently manifest. I think the judgment of any one who will compare their work will be that Mangoldt in 1855 had as clear a concept of the general doctrine of rent as any to which Schäffle ever attained; but the

* "Volkswirthschaftslehre," p. 485.

latter, being the first to treat the question in a text-book, may be said to have incorporated it a little more distinctly in the general body of economic theory.

And yet, despite the fact that this general doctrine of rent was "so much in the air," there were undoubtedly not a few German economists who failed to lay firm hold upon it. So strongly had the English classical school impressed itself upon all subsequent economic literature that German as well as English economists succumbed to its influence, not a few of the former failing to recognize the importance of the work done by such men as Hufeland and Mangoldt. Berens in his "Dogmen geschichte der Grundrente," published as late as 1868, devotes, with the exception of a rather full notice of Liebig, less than fifty pages of a four-hundred-paged book to the German literature of his subject. Hufeland is dismissed with a meagre page and a half, and this despite the fact that Berens takes cognizance of that extension (Erweitering) of the doctrine to the other factors of production in which Hufeland played so conspicious a part.

59. The Austrians on the General Doctrine of Rent.—While this doctrine may yet lack something of complete acceptance among English and German economists, the Austrians regard it as so inherent a part of economic thought as to require no further discussion.

Wieser writes: "His [Ricardo's] theory of land

was amplified by pointing out that the rent of land is influenced by situation,—*i.e.*, by its distance from the market for its produce. Finally, it has been shown that the 'rentability' of land in towns, and also that of *capital and labor*, is graduated in the same way as that of agricultural land, and that the opportunity of obtaining for the better quality a greater rent—a surplus return and a surplus value—occurs as often in the one case as in the other." ("Natural Value," p. 112.)

In conclusion, it may be maintained that economists are to-day fairly well agreed that rent is a general function, common to all the factors of production. In other words, that every surplus which does not enter into the determination of price is a rent, whether it is secured by landlord, capitalist, laborer, or entrepreneur.

BOOK II.—PROFIT.

CHAPTER I.

PROFIT A PRICE-DETERMINING SURPLUS.

RICARDIAN economics divided the total social surplus into rent, wages, and interest. The first two being determined by definite laws, profit was made to include all that was left after rent and wages were paid. In other words, the term profit was applied to an undefined complex return in the same loose way in which the pre-Smithian writers employed the term rent. That profit, under this use of the term, included interest was generally recognized. Ricardo, indeed, frequently employs interest and profits as though they were interchangeable terms. That this resulted in more or less confusion of thought need hardly be urged.* The first to attempt an anal-

* When Ricardo wrote of "the common rate of profit"* he doubtless had in mind that portion of the complex return which is usually designated as interest. So, too, when he wrote, "Let us suppose that all commodities are at their natural price, and consequently that the profits of capital in all employments are exactly at the same rate."†

Elsewhere he writes: "A fall in the general rate of profits is by no means incompatible with a partial rise of profits in

* Bohn edition, p. 49.

† Ibid., p. 68.

ysis of this complex return was the late Francis A. Walker, who insisted that the term profit should be restricted to that part of the entrepreneur's return which follows the law of rent. In the present chapter we will find occasion to take exception to this use of the term, and will suggest that it should be restricted to those monopoly surpluses that enter into the determination of price, while rent should include any and all surpluses that are determined by price. Later on we will endeavor to show that interest is distinguished from both rent and profit by the fact that it is a normal surplus. (See Sections 113 to 115.)

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particular employment. It is through the inequality of profits that capital is moved from one employment to another." * Here under the name of "general rate of profits" we have the phenomena of interest, while under profits in particular employments we have a recognition of that "pure profit" which as Clark has declared, "exists under natural laws only while society is changing." Indeed, this very dynamic quality is clearly recognized in the last sentence of the paragraph just quoted.

Ricardo was probably conscious of the complex character of the phenomena which he had included under the term profit. But as he held that scarcity values are the exception rather than the rule, profit, as we employ the term, would naturally play an unimportant part in his scheme of distribution, hence any further analysis of this complex return seemed unnecessary. But this, as we have urged, is a method of procedure that is not open to those who believe that scarcity goods are the rule rather than the exception.

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* Bohn edition, p. 97.

So long as our reasoning rests upon the Ricardian assumption of free competition the necessity for this economy in the use of terms does not appear. But the moment we admit, with the Austrians, that scarcity goods are the rule rather than the exception we are compelled not only to construct a theory of value that will include such commodities, but are likewise constrained to take some cognizance of such scarcity goods in our theory of distribution. It is no longer open to us to dismiss monopoly surpluses, or those surpluses which enter into the determination of price as something conceivable rather than actually existing. On the contrary, they must be reckoned with and named from the very inception of any modern treatment of the problem of distribution.

I. RENT AND PROFIT AND THEIR POINTS OF DIFFERENCE.

Let us first take the case of a commodity that is freely reproducible or that does not have a scarcity value. In the production of this commodity a number of entrepreneurs are engaged. As men vary widely in business skill and ability, some of these entrepreneurs will doubtless succeed in producing the commodity at a lower cost than others. As it is a freely reproducible commodity, the least skilful entrepreneur engaged in its production will secure only his cost. That is, he will secure only wages and interest plus a normal wage for himself as an entrepreneur. Those, however, that are more skilful will secure in addition a surplus above their

cost. The amount of this surplus will vary, of course, with their several degrees of skill and ability. This is the differential surplus to which Walker has given the name profit, but as it admittedly follows the law of rent, it seems better to follow the German economists and call it the rent of the entrepreneur.

Let us, again, take a case in which the commodity has a scarcity value. Assume that among the several entrepreneurs there is the same variation in skill or ability. Under this last assumption all save the marginal entrepreneurs will receive a differential surplus or rent, whose amount is determined by their several degrees of skill. Since, however, we are here dealing with a scarcity good, it follows that each and every entrepreneur engaged in the production of this commodity, the marginal man as well as the most skilful, will receive an additional surplus, to which I would restrict the term profit.

60. Rent an Individual, Profit a Group Surplus.—In developing the points of difference between these two forms of surplus it should first be noted that rent varies with the individual skill or ability of the entrepreneur. On the other hand, profit is secured in equal amounts by each and every member of the group of entrepreneurs engaged in the production of the given commodity. Hence one might be characterized as the *individual* and the other as the *group* surplus.

61. Rent a Differential, Profit a Marginal Surplus.—The several individual surpluses may be con-

ceived as arranged in a series, and if this number is large enough, as in the case of wheat land, their variations might be by differential increments. From this stand-point, therefore, they might be regarded as *differential* surpluses. The second form of surplus, however, is secured by the marginal producer in common with all others engaged in the production of the given commodity, hence it might be called the *marginal* surplus.

62. Rent a Limited Monopoly, Profit a Monopoly Surplus.—Then, too, this group or marginal surplus enters into the determination of price, and is clearly the result of a monopoly advantage in production, and so might fittingly be styled a Monopoly Surplus. The individual or differential surplus, on the contrary, is not the result of any such monopoly advantage in production, or at least not to the same degree. In the case of wheat land, for instance, it is not a question between good land and no land at all, but between good land and poorer land. And so while there is undoubtedly a scarcity of the best land, yet the monopoly in such land is limited or restricted by the existence of other available though poorer land. Hence if the first is a *monopoly* surplus, the second is at most a *limited monopoly* surplus. This difference is clearly recognized by Malthus, who writes: "That there are some circumstances connected with rent which have an affinity to a natural monopoly will be readily allowed. The extent of the earth itself is limited and cannot be enlarged by

human demand. And the inequality of soils occasions, even at an early period of society, a comparative scarcity of the best lands; and so far is undoubtedly one of the causes of rent properly so called. On this account, perhaps, the term partial monopoly might be fairly applicable. But the scarcity of land thus implied is by no means alone sufficient to produce the effects observed. And a more accurate investigation of the subject will show us how essentially different the high price of raw produce is, both in its nature and origin and the laws by which it is governed, from the price of a common monopoly." ("An Inquiry into the Nature and Progress of Rent," p. 7.)

63. Rent a Price-Determined, Profit a Price-Determining Surplus.—There is, however, a still more important difference between these two forms of surplus, and one that will further justify the restricting of the term monopoly to the group or marginal surplus. The price of any commodity is the amount the consumers must pay under the existing condition of the supply of the given commodity. In other words, it is the amount that must be paid to the marginal producer to induce him to continue his efforts to put this commodity on the market. In the case of freely reproducible goods this amount will equal the cost of this commodity to the marginal producer, but where the good has a scarcity price this amount will contain a surplus above the marginal producer's cost. It is nevertheless true that this surplus must be paid if the supply of the commodity is to be

maintained. *It is, therefore, the essential and all-important characteristic of the group, marginal, or monopoly surplus, that it enters into the determination of price, while the individual, differential, or limited monopoly surplus does not enter into the determination of price.* It is true that the latter is included in the price, but, as has long been maintained, the causal relation is from price to rent and not from rent to price. Now, one of the concepts that we have always asssociated with monopoly influences is their power to fix the price which the consumer must pay. If we hold fast to this it follows that the term monopoly surplus can only include that which we have severally designated as the group or marginal surplus. But far more important than this limitation of the term monopoly is the distinction lying back of it,—namely, that *one form of surplus is price determined and the other price determining.*

It seems, then, that our two forms of surplus may be variously characterized as follows:

Rent might be called	Individual, Differential, Limited Monopoly, or Price-determined	Surplus.
Profit might be called	Group, Marginal, Monopoly, or Price-determining	Surplus.

64. Competing Differential Concepts.—It might be urged as against the above contention that since scarcity prices are of such frequent occurrence, the various industries could be arranged according to the amount of their marginal surplus, and that this would give us a series that might be even more truly differential than that to which we have applied this term. But, after all, what economists wish to know is, how the total surplus contained in the price of any given commodity is distributed among those who are parties to the production of that commodity. In other words, the ultimate objective phenomena with which we have to deal are the prices of commodities. Hence we would insist that the differential surplus, which has primary importance for us as students of distribution, is that which arises in connection with the production of a given commodity. This is the differential surplus that is determined by price, and hence in all studies of distribution must be sharply distinguished from that marginal surplus which enters into the determination of price.

II. INTEREST AND PROFIT AND THEIR POINTS OF DIFFERENCE.

Having clearly distinguished profit from rent, it will now be necessary to distinguish profit from the other form of surplus (interest) so often confounded with it. In doing so I shall be compelled to anticipate a portion of the argument of a much later chapter. We have just seen that the differential series which is developed in the production of a

given commodity is not the only series of this kind that might arise. In other words, we may conceive of the various industrial activities as arranged in a series according to their relative productivity or profitableness. From this it follows that there are two conceivable margins of production,—the margin in the production of a given commodity and the margin of the entire field of industry. Since the supply of capital is limited while the opportunities for its profitable employment are practically unlimited, it follows that all capital which is free to move can find profitable employment; but here as elsewhere the return secured by the capitalist as such is determined by the marginal utility of capital or by its productivity in the marginal or least productive industry.

65. Interest a Normal, Profit a Monopoly Surplus.—It is to this marginal surplus, or the earnings of capital in the marginal or least productive industry, that the term interest must be restricted. Profit, on the other hand, is the marginal surplus that arises in connection with the production of a single commodity. Again, profit only arises where free competition fails, and so is a monopoly surplus. Interest, as we shall take occasion to show later on (Sections 113 to 115), only arises under conditions of free competition, and so, in contradistinction to the other two forms of surplus, may be called a normal surplus. This gives us the three forms of surplus,—Rent or limited monopoly surplus, Profit or the strictly mo-

nopoly surplus, and Interest or the normal surplus. The first two are developed in connection with the production of any given commodity, the third is determined in the entire field of production. It should also be borne in mind that while rent is price determined, both profit and interest enter into the determination of the price of commodities.

CHAPTER II.

PROFITS AND THE CONCEPT OF A NO-RENT LAND.

It has been shown that in the production of any given commodity all payments at the margin enter into the determination of price. Again, it was maintained that the original and fundamental contention of the doctrine of rent was that rent is a surplus that does not enter into the determination of price. This compels the further conclusion that the marginal land does not pay a rent, or that there is a no-rent land. This corollary of the doctrine has been subjected to so much criticism as to compel its abandonment by some of the most strenuous advocates of the doctrine of rent. It is the purpose of the present chapter to show that this abandonment of the concept of a no-rent land is unnecessary, and that the arguments against this corollary get their seeming force by confounding the differential surplus or rent with a marginal surplus or profit.

66. Mill's Admissions and their Logical Result.—"Rent," writes Mill, "is not an element in the cost of production of the commodity that yields it, except in the case (rather conceivable than actually existing) in which it results from and represents a scarcity value. But when land capable of yielding rent in

agriculture is applied to some other purpose the rent which it would have yielded is an element in the cost of production of the commodity."

Whether Mill so intended it or not, we here have a complete abandonment of the doctrine of rent, and this whether we confine ourselves to the first or second of his contentions. It has elsewhere been shown that Mill's contention in regard to scarcity goods being exceptional is without warrant in experience. As a matter of fact, such goods are the rule rather than the exception. What, then, becomes of the doctrine of rent under Mill's first contention? Nor is the outlook any more hopeful under his second contention. Let us assume that a rise in the price of wheat makes it profitable to extend wheat cultivation to land that has heretofore been employed for grazing. Then, if I understand Mill's second contention, he holds that the amount paid for the use of this land for the growing of wheat must include the amount paid for grazing purposes, and will therefore enter into the determination of the price of wheat.

That the farmer of the marginal wheat land (formerly grazing land) must pay the owner of this land an amount that is equal to its rent as grazing land must be admitted. It must also be admitted that as this is a payment at the margin of wheat production it will enter into the determination of the price of wheat. From this Mill concludes that in all such instances *rent* enters into the determination of price. Now, when it is remembered that under this conten-

tion rent enters into the determination of the price of all the products of land save those that are produced in the least profitable branch of land employments, it is clear that Mill's second contention is well-nigh as fatal as the first to the doctrine of rent.

67. **Mill inadvertently includes a Marginal Surplus or Profit under Rent.**—Mill, of course, did not see that his contentions led to this result, and so continued to hold the doctrine of rent as an essential part of the orthodox scheme of distribution. The reason for this failure to realize the serious nature of his admissions is to be found in the facts, first, that he believed scarcity goods to be "rather conceivable than actually existing," and, second, that he failed to recognize that under his second contention he was dealing with that very scarcity value which he believed might safely be ignored. As Clark has written, "For exact results each distinct kind of agriculture needs to be treated as a separate industry. The principle of non-competing groups has as clear an application here as in other departments of economy. Wheat farming can scarcely be said to come into competition with sheep raising, nor can market gardening with dairy farming, wool growing, or cattle raising. . . . Each of these industries has its own margin of cultivation." In other words, when Mill included the rent paid for one use of land as part of its rent in another employment he included a scarcity, marginal, or monopoly surplus under the caption of rent. This may be shown *a priori* and

in a brief way. In the preceding chapter we saw that the monopoly surplus contained in the price of scarcity goods was secured by the marginal man in common with all those that produce under more favorable circumstances. In other words, the scarcity of any good is reflected in the fact that it yields a monopoly, or marginal surplus, or a surplus that enters into the determination of price. A moment's consideration will show that the amount which would have been paid for the land for grazing purposes is a surplus of this kind. For it is secured by the owners of the marginal land in wheat production in common with the owners of the better land employed in the producing of wheat, and thus as a group, monopoly, or marginal surplus it certainly enters into the determination of the price of wheat. In other words, we here have that marginal surplus to which the name profit has been applied. I would urge, therefore, that the including of this form of surplus under the term rent can only result in confusion.

68. Rent the Differential Surplus in a Single Industry.—The question now arises, Is there any part of the total payment made to the owners of wheat land that is a differential surplus, or that does not enter into the determination of price, and so satisfies the fundamental condition of the doctrine of rent? The answer is yes. If we confine ourselves to the variations in the productivity of land employed for the growing of some one commodity, say wheat, we find a surplus that is a true differential and which

does not enter into the determination of the price of the given commodity. Any payments beyond this are included either under interest or profit, and though these latter surpluses are both included in the gross amount paid to the landlord, there is no more reason for including one than for including the other under the term rent. In either case you invalidate the whole doctrine of rent. In brief, then, the rent of wheat land is not the difference in productivity between the best wheat land and the poorest land in any employment, but the difference between the best and poorest wheat land.

69. Hobson's Objections to this Use of the Term Rent.—The earlier discussion of this question was largely confined to the problem of land rents. But with the recognition of the fact that rent is a general function common to all factors of production, a more extended use of the term rent has been made to include not only the earnings of land but as well the whole range of industry. A recent writer* has declared, "It will be open to us if we prefer it, for it is entirely a question of convenience in the use of the terms, to say that land . . . at the margin of employment pays no rent; that is, we may take the lowest return for the use of land and call it by some other name than rent. We would thus be able to maintain, as a general proposition, that rent forms no element of price. But to do this we would be

* J. H. Hobson, Quarterly Journal of Economics, 1891.

compelled to an elaborate grading of industries, according to the prices paid for land, labor, and capital, at the margin of employment in each respective industry.

"If, on the other hand, as seems more reasonable, we should prefer to measure by a single line of fixed money value applied through the whole of industry, we must call by the name rent all payments for the use of land, and all payments beyond three per cent., and five shillings for the use of capital and labor. But whichever mode of reckoning we prefer, it will be equally applicable to all three requisites of production."

Now, it may be true that "it is entirely a question of convenience in the use of terms" whether we employ separate and distinct terms for these two forms of surplus or take rent as a generic term applicable to both, and then distinguish between them by employing additional qualifying terms, as price-determining or price-determined rent. But it is hardly a question of mere convenience whether or not one of the fundamental cleavage planes in all questions of distribution shall be recognized in our terminology. In other words, we can only confound confusion by including both these forms of surplus without any discrimination under a common name. It is true that both forms enter into the amount paid to the landlord, yet by what compulsion must both of them be included under the term rent? This term has already been appropriated and long defined as a sur-

plus that is determined by price. Why, then, so long as we have a share in distribution of which this is true, should we surrender this use of the term that it may be reappropriated and redefined? It is true that Ricardo, having in mind an ideal condition of free competition, held that price was made up of rent and costs. At present, however, we recognize the general prevalence of scarcity goods, and have reconstructed our theories of value and price to the end that they shall include such goods. Why, then, should we confound the discussion of distribution by including the special and peculiar surplus that results from scarcity values, and so enters into the determination of price under the term rent?

We have already maintained that there are three essentially different forms of surplus,—the differential, the marginal, and the normal; the last typified in interest. Our objection to Hobson's contention is, in brief, that in his anxiety clearly to distinguish this third form from the other two he is led to ignore the difference between the differential and marginal surpluses, a difference which I believe to be of fundamental importance in any discussion of the problem of distribution.

70. Objections to Walker's Use of the Term Profit.—We have seen that Walker applied the term profit to that portion of the entrepreneur's return which follows the law of rent. Not the least of the objections to this use of the term profit is the fact that it breaks in the most violent way with all the traditions of the

science. For no matter how confused economists may have been in their use of the term profit, no matter how they may have confounded it with interest, they seldom failed to maintain that it enters into the determination of price, and hence that it is in direct antithesis to rent or to that which is determined by price.

Adam Smith writes: "Rent, it is to be observed, therefore, enters into the composition of the price of commodities in a different way from wages and profit. High or low wages and profit are the causes of high or low price; high or low rent is the effect of it."

Malthus writes: "Profits are in reality a surplus, as they are in no respect proportioned (as intimated by the economists) to the wants and necessities of the owners of capital, but they take a different course in the progress of society from rents, and it is necessary, in general, to keep them quite separate." *

Ricardo writes: "Mr. Malthus appears to think that it is a part of my doctrine that the cost and the value of a thing should be the same; it is, if he means by cost, 'cost of production' including profits." † Again, on page 345, he writes: "The laws which regulate the progress of rent are widely different from those which regulate the progress of profits, and seldom operate in the same direction."

J. S. Mill writes: "Profits, therefore, as well as

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* Inquiry into the Nature and Progress of Rent, p. 16.

† Bohn edition, p. 39.

wages, enter into the cost of production, which determines the value of produce." While Walker himself never fails to insist that the essential fact in regard to rent is, that it does not enter into the cost of production.

This being the final test in regard to "rent," why should we not call that part of the entrepreneur's return that satisfies this condition the rent of the entrepreneur, so allowing us to employ the term "profit" to designate that form of surplus which enters into the determination of price? This, as I have endeavored to show, would agree better with the traditional use of the term profit.

71. The Suggested Use of the Terms Rent and Profit.—It is not given to any one person to say what terms shall be adopted; this can only result from the establishing of some consensus in the matter among economists generally; a single writer may show, as I have endeavored to do, that a new concept has arisen, and that a failure to reach any agreement as to the terms employed has resulted in increasing confusion; he may then suggest such terms or use of terms as seems to him to eliminate this source of confusion. To that end I would suggest that the term rent be strictly confined to the price-determined surplus that arises in connection with the production of a given commodity, and that the term profit be confined to the monopoly or price-determining surplus that arises in connection with the production of a given commodity.

But too much must not be expected from these or any other equally short terms. If, consciously or unconsciously, we think of these as meaning individual and group, differential and marginal, or anything but price-determined and price-determining surpluses, we are likely sooner or later to end in confusion. When we write rent, we should think price-determined surplus. When, on the other hand, we write profit, it is price-determining surplus that should be called up in our mind. It is far less important what terms are employed than that we should not lose sight of this fundamental distinction.

BOOK III.—INTEREST.

CHAPTER I.

EARLIER IDEAS IN REGARD TO INTEREST.

I. USURY IN LESS DEVELOPED SOCIETIES; INTEREST IN HIGHLY DEVELOPED SOCIETIES.

In earlier times a large portion of all loans was made for purposes of consumption, and frequently to people in great need of money. Such loans, indeed, still predominate in communities where capitalistic methods of production have not attained any great development. Under such circumstances the interest* paid is usually quite high; the capitalist (or seller) has the monopoly advantage, and is disposed to force the price of his commodity to the extreme limit set by its marginal utility to the borrower (or buyer).

72. Aristotle.—It is not at all surprising, therefore, that under these circumstances the taking of interest has been vehemently denounced by both philos-

* The term interest is here employed as in common usage, and so includes a monopoly surplus. Later on it will be limited to the rate fixed by the marginal productivity of capital or to the *normal* return for the use of capital.

opher and priest. Aristotle writes: "The most hated sort [of money-making], and with the greatest reason, is usury, which makes a gain of money itself, and not from the natural use of it. For money was intended to be used in exchange, but not to increase at interest. And this term usury, which means the birth of money from money, is applied to the breeding of money because the offspring resembles the parent. Wherefore of all modes of making money this is the most unnatural."*

In ancient times this attitude towards the problem of interest found repeated expression in the civil law. This was especially true wherever the agrarian element exercised the legislative function, but as commerce expanded, such laws, though still retained on the statute books, became, to a large extent, dead letters. After the collapse of the Roman Empire and the return of society to more primitive conditions the opposition to interest was again renewed. But with the rise of modern trade and industry, which preceded the Reformation, the attitude towards this question again suffered a change, the canon laws and the denunciations of the Church being alike ignored in more progressive countries like the Netherlands.

73. Calvin.—In keeping with this tendency we find that the champion of Protestantism not only repudiates the canon laws, but actually defends the taking

* Jowett's translation, p. 19.

of interest where it is "equitable and fair." It is interesting to notice that his defence rests entirely upon the change that had taken place in industrial conditions, a change that resulted in a condition of affairs in which most loans were made for purposes of production. And so we find that Calvin recognizes that the rate of interest may be fair and equitable when the borrower can so employ the sum borrowed as to secure a return for himself in excess of the interest paid to the lender.

74. Locke.—This phase of the question is still further accented by Locke;* he, however, like Calvin, still has in mind only that interest which is a return for the use of money.

II. INTEREST A RETURN FOR THE USE OF WEALTH AND NOT FOR THE USE OF MONEY.

75. Hume, however, saw quite clearly that interest is a return for the use of wealth in general and not for the use of a particular form of wealth,—money. This comes out in his demonstration of the fact that the rate of interest in a country does not depend on the amount of gold and silver that the country possesses, "but on the amount of its riches or stock."†

The importance of this proposition in its bearing upon the theory of interest is even yet not fully

* Some Considerations of the Consequences of Lowering the Rate of Interest and Raising the Value of Money, 1691.

† Of Interest, Essay XXVI.

realized, many well-meaning though not well-informed advocates of reform still contending that the rate of interest may be decreased by increasing the supply of money. Anything like a complete solution of this problem must be deferred to a later chapter, but it may be well to note that while the total payment to a landlord includes several elements, yet economists have restricted the term rent to a particular portion of this total payment; so, too, the total payment for the use of capital may include several elements, but for the sake of clear thinking economists must restrict the term interest to a particular portion of this total payment. The owner of a scarce machine or plant secures a certain net return. Out of this he pays a certain minimum rate to the capitalist for the sums borrowed. It is to this minimum rate that economists would restrict the term interest. Any surplus above this is clearly due to the scarcity of the particular machine or plant; for as these are multiplied such extra gain tends to disappear. The application of this to the case of money is obvious. An increase in the supply of the money commodities would unquestionably tend to decrease the extra gain that arises from the scarcity of these particular forms of wealth, but it would not seriously or directly affect the normal surplus or interest *per se*.*

* Prior to Hume's time it was held that a nation should so regulate its commerce as to attract to itself large supplies of

76. Adam Smith.—While this writer did not succeed in working out any coherent theory of interest, yet his "Wealth of Nations"* contains the suggestion of at least four theories that have found favor in more recent literature. These are known as The Exploitation Theory, The Use Theory, The Productivity Theory, and the Abstinence Theory. In the chapters immediately following we will review these theories in the above-mentioned order.

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the money commodities,—gold and silver. In other words, it was held that a country was wealthy if it held large stocks of these commodities. Hume protested against this, declaring that the wealth of a community did not lie in its supply of the *money* commodities, but in its supply of general commodities, the things that men eat, wear, etc. The reaction of thought that set in with Hume's statement of the case has possibly gone too far. It is true that the normal surplus or interest *per se* depends in last resort upon the marginal productivity of general capital, and so is largely independent of the supply of money or money commodities. It is, however, also true that a limited supply of money may give to the owner of these money commodities a monopoly advantage; hence *variations* in the supply of money may seriously affect the distribution and so the production of general wealth. It remains true, however, and this is the fact that interests us most at this point, that interest *per se* is a normal surplus, and depends not upon the amount of the money commodities in a country, but upon the supply of general capital or productive goods.

* Book I. Chap. VI., and Book II. Chap. I.

CHAPTER II.

THE EXPLOITATION THEORY OF INTEREST.

THIS theory may be fairly stated in the following propositions:

1. The value of any good is measured by the quantity of labor required to produce it.

2. Capital is not an original and independent factor of production, but may be resolved into the labor that produced it.

3. The whole product belongs in equity to the laborer. The capitalist, however, takes advantage of the laborer's necessities and compels him to make a wages contract that despoils the wage-earner of a large part of the product of his labor; this is done, of course, under the sanction of law and custom.*

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* These propositions will all be found in the following passages from Rodbertus. He writes: "As there can be no income unless it is produced by labor, rent rests on two indispensable conditions. First, there can be no rent if labor does not produce more than the amount which is just necessary to the laborers to secure the continuance of their labor, for it is impossible that without such a surplus any one, without himself laboring, can regularly receive an income. Secondly, there could be no rent if arrangements did not exist which deprive the laborers of this surplus, either wholly or in part, and give it to others who do not themselves labor, for in the nature of things the laborers themselves are always the first to come into possession of their product. That labor yields

77. The Contention that the Value of all Goods is measured by Quantity of Labor.—It should be noted that the socialist writers believed that in this contention they simply followed the teachings of the

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such a surplus rests on the economic grounds that increases the productivity of labor. That this surplus is entirely, or in part, withdrawn from the laborers and given to others rests on grounds of positive law; and as law has always united itself with force, it only effects this withdrawal by continual compulsion." Rodbertus defines rent as "all income secured without personal exertion solely in virtue of possession." The term rent, as here employed, evidently includes any and all parts of the social product that are not secured by the laborer, whether they take the form of rent, profit, or interest.

"The form which this compulsion originally took was slavery, the origin of which is contemporaneous with that of agriculture and landed property. The laborers who produced such a surplus in their labor-product were slaves, and the master to whom the laborers belonged, and to whom consequently the product itself also belonged, gave the slaves only so much as was necessary for the continuance of their labor, and kept the remainder or surplus to himself. If all the land, and at the same time all the capital of a country, has passed into private property, then landed property and property in capital exert a similar compulsion even over freed or free laborers. For, first, the result will be the same as in slavery, that the product will not belong to the laborers, but to the masters of land and capital; and, secondly, the laborers who possess nothing, in the face of the masters possessing land and capital, will be glad to receive a part only of the product of their own labor with which to support themselves in life; that is to say, again, to enable them to continue their labor. Thus, although the contract of laborer and employer has taken the place of slavery, the contract is only formally and not actu-

orthodox economists to their legitimate conclusions, —a belief for which they certainly found considerable warrant in the writings of the earlier English economists.

(*a*) RICARDO AND THE CASE OF SCARCITY GOODS. —Ricardo writes: "There are some commodities the value of which is determined by their scarcity alone. No labor can increase the quantity of such goods, and therefore their value cannot be lowered by an increased supply. Some rare statues and pictures, scarce books and coins, wines of a peculiar quality, which can be made only from grapes grown on a particular soil of which there is a very limited quantity, are all of this description. Their value is wholly independent of the quantity of labor originally necessary to produce them, and varies with the varying wealth and inclinations of those who are desirous to possess them." He, however, adds, "These commodities, however, form a very small part of the mass of commodities daily exchanged in the market. By far the greatest part of those goods, which are the object of desire, are procured by labor; and they may be multiplied, not in one country alone, but in many, almost without an assignable limit, if we are disposed to bestow the labor necessary to obtain them." ("Principles of Economics," Chap. I. Sect. I.)

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ally free, and hunger makes a good substitute for the whip. What was formally called food is now called wage." ("Soziale Frage," p. 33.) We have here availed ourselves of the translation in Böhm-Bawerk's "Capital and Interest."

While we have here a clear recognition of the fact that value may be determined either by labor or by scarcity, yet the cases in which scarcity is the determining factor are dismissed from further consideration as being of exceptional occurrence in the world's exchanges. Clearly, then, the argument by which the orthodox economists would demonstrate that value depends entirely upon labor stands or falls with the truth of this last assumption,—that scarcity goods are exceptional. It is in this connection that Böhm-Bawerk introduces his formidable list of exceptions to this assumption of the orthodox economists.

Böhm-Bawerk first shows by Ricardo's own admissions that rare statues and pictures, scarce books and coins, wines of a peculiar flavor, and the products of the better lands are exceptions to this assumed prevalence of freedom in production. To these Böhm-Bawerk adds the products of more skilful laborers, as well as all goods in whose production some patent, copyright, or trade secret plays a part. Böhm-Bawerk also calls attention to the fact that even so-called freely reproducible goods are only such during the brief interval that their price is actually at the normal point, or that during their fluctuations on either side of the normal they cease to be freely reproducible goods.

Finally, we come to an exception that bears directly upon the interest problem, for Ricardo himself declares that "the principle that the quantity of labor employed on the production of goods regulates

their relative value suffers considerable modification by the employment of machinery and other fixed and durable capital." ("Principles of Political Economy," Bohn edition, p. 23. Heading of section.) As in this last exception we have the crux of the whole discussion, we would not seem to beg the question by too strong an insistence upon it at this stage of the argument. Its introduction at this point will, however, serve to show that the contentions of the socialist writers have not that unqualified support of the orthodox economists which the former would fain believe.

On the other hand, it should be noted that a very important group of the admitted exceptions is eliminated if we have in mind a *marginal* cost theory. In that case the products of the better land, more efficient machines, and more skilful labor cease to be exceptions to our theory of price. But even with these eliminated we still have a formidable list of exceptions. When to all goods in whose production a patent right, trade secret, import duty, pool, or trust plays a part, we add all so-called freely reproducible goods, except for the brief interval that their price is actually at the normal point, we have a very serious list of exceptions to the contention that the value of goods is determined by the *labor* expended in their production.

This argument, based upon the general prevalence of scarcity goods, occupies considerable space in Böhm-Bawerk's criticism of the Exploitation Theory, and

yet it must be admitted that it does not seriously affect the ultimate contention of the socialist writers. It is clearly open to them to reply, Your whole argument is a manifest admission of our claim. We do not deny the existence of scarcity values as society is now constituted. On the contrary, we hold that the present inequitable distribution of the social product is due to the existence of these monopoly goods. Under a socialistic *régime*, however, all such scarcity or monopoly prices would disappear, and the value of all goods would be measured by the quantity of labor required to produce them.

(*b*) WHAT LABOR IS THE STANDARD OF VALUE?—But even though we accept the teaching of the socialists, that value is measured by quantity of labor, we have in this a proposition that is confronted by serious practical difficulties. If labor is the source of all value, the question naturally arises, By what labor shall this value be measured? The man that produced the commodity may have been lazy and indifferent; must we pay him for his time, no matter how long he takes to complete the work, or shall we pay him according to the time of the most expert man we can find? Marx answers that we must pay for any commodity "the socially necessary labor time," and this he defines as the "labor time required to produce a use value under the conditions of production that are socially normal at the time, and with the socially necessary degree of skill and intensity of labor."

"The single commodity here is to be counted as the average sample of its class. Commodities, therefore, in which equally great amounts of labor are contained, or which could be made in the same labor time, have the same amount of value. The value of one commodity is to the value of every other commodity as the labor time necessary to the production of the one is to the labor time necessary to the production of the other. . . . As values all commodities are only definite amounts of congealed labor time." *

Now, no matter how we may attempt to disguise the facts by the use of such phrases as "the socially necessary degree of skill and labor," it still remains true that the more capable man will not exert his full power if his reward is no greater than that of a less capable and possibly lazy companion. This is something that is so inherent in the nature of mankind that its elimination can only be effected by subjective changes in man himself. Structural changes in society, the introduction, for instance, of a socialistic *régime*, can only remotely affect the problem. For, despite all our assumptions to the contrary, men as actually constituted are individuals; they differ in skill and ability, and they demand that they shall be specially rewarded for the exertion of any superior power which they possess. And yet if the socialist theories mean anything, they mean that labor, like

* Das Capital, second edition, p. 10.

all other goods, must be rated according to the pain or disutility endured.

Marx has attempted to meet this difficulty as follows: "Complicated labor counts only as strengthened or rather multiplied simple labor, so that a smaller quantity of complicated labor is equal to a greater quantity of simple labor. Experience shows that this reduction is constantly made. A commodity may be the product of the most complicated labor; its value makes it equal to the product of simple labor, and represents, therefore, only a definite quantity of simple labor." *

Does this, however, solve our difficulty? It is undoubtedly true that if a day's labor of a skilled physician or artist is worth fifty dollars, and a day's labor of a porter or navvy is worth only one dollar, then the pay of the former may be expressed as fifty times the pay of the latter. But does this help us in any way? According to the contention of the socialists, the pay of labor should be equated to the pain or disutility endured. How, then, are we to reconcile this with the fact that while one man receives one dollar another man receives, and must receive as men are constituted, fifty dollars for a day's labor involving even less fatigue? Nor is it a good and sufficient answer to this question to say that the physician or artist has expended much time, money, and

* Das Capital, p. 19. See also Ricardo's Principles, Chap. I. Sect. II. p. 13.

labor in acquiring his skill, for it may be retorted that much of their ability is natural and not acquired. In other words, the value of labor, as of all commodities, depends fundamentally upon its utility and supply; pain or disutility only entering into the problem when it is the cause of the limitation of the supply.

78. Contention that Capital is not an Original and Independent Source of Value. — Rodbertus writes: "Every product that comes to us through labor in the shape of a good is, economically speaking, to be placed to the credit of human labor alone, because labor is the only original power, and also the only original cost with which human economy is concerned." * This, of course, excludes both nature and capital as original and independent factors of production.

(*a*) NATURAL GOODS ARE SOMETIMES ORIGINAL POWERS.—With regard to natural goods, Rodbertus writes: "All other goods except those that cost labor, however useful or necessary they may be to mankind, are natural goods, and have no place in economic consideration. . . . Man may be thankful for what nature has done beforehand in the case of economic goods, as it has spared him so much extra labor, but economy takes no notice of them only in so far as labor has completed the work of nature." †

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* Erklärung und Abhilfe, p. 160. Similarly, Sociale Frage, p. 69.

† Sociale Frage, p. 69.

That this is true of those natural goods, like air and water, whose supply is practically unlimited no one will question. But what shall we say about those natural goods whose supply suffers serious limitations? We can hardly say that "economy takes no notice of them" when we are constrained to economize in our employment of them. By socializing these goods we would prevent particular individuals from monopolizing them to their own peculiar advantage. But we would not thereby remove them from the category of economic goods.

(*b*) CAPITAL AN INDEPENDENT POWER.—That capital is not an original power will be generally admitted, but when it is further urged that it is not an independent power or factor in production, the conclusion does not seem to be so well founded.

First. As we have just seen, labor is not the only original power deserving economic consideration. Natural forces if limited in supply share with labor this unique distinction. Hence, in labor and the other natural forces which we are compelled to economize, we have the two factors that join in the creation of the secondary power—capital. It is, therefore, impossible to resolve all capital into labor alone.

Secondly. Though it were true that all capital could be resolved into labor, as the original source from which it sprung, that does not justify the claim that capital is not now an independent factor. When we show that a particular organic form has been evolved from some protoplasm of the past, we do not hold

that it is not now an independent species far removed from that from which it was evolved.

Thirdly. Though mankind labored never so assiduously, the increase of the supply of capital necessarily involves the postponement of some enjoyment, some abstinence or disutility endured by the marginal saver or capitalist. Hence while it is largely true that without labor there would be no capital, yet it is equally true that without the abstinence of the marginal saver there would likewise be no capital.

79. The Contention that the Whole Product belongs in Equity to the Laborer.—This brings us to the third and last proposition, that "according to nature and the 'pure idea of justice' the whole value of the product ought to belong without deduction to the laborer who produced it." That this contention has been successfully attacked by Böhm-Bawerk cannot, I think, be denied. His argument is, in brief, as follows:

That the laborer should at the present time receive the present value of his product, or that at some future time he should receive the now future value of the product, may be consonant with the strictest equity, but that he should at the present time receive the future value of his product is neither just or equitable, so long as men generally prefer a hundred dollars in hand to-day rather than the most positive assurance of receiving a like amount at some future date.

Let us take the case of wine. As is well known,

wine improves with time, and with this improvement there is a corresponding advance in price. A cask of wine which was worth ten dollars when new may at the end of ten years be worth twenty dollars. To whom shall this increase be credited? If we say that it belongs to the laborers, we must show in what way they have a claim upon an increase in value that takes place long after they have ceased to expend any effort in the production of the wine. If we answer that labor is the only source of value, hence this increase in value should be distributed among the laborers who were originally employed in its production, we, of course, beg the whole question, since we are here trying to determine whether or not the laborer is entitled to the entire value of the product.

Suppose, however, we admit that the laborer's claim to this increase in value is well founded, how, then, are we to determine the amount to be paid to the laborers? If we give them the entire value of the wine at the time of the vintage (ten dollars), we leave in the hands of the employer a surplus of which, according to Rodbertus and Marx, the laborer is robbed. Shall we, then, pay to the laborer the value of the wine at the end of the ten years, or twenty dollars? If we decide this in the affirmative we are confronted with the question, How do we know how long it will be before the wine is sold? It might be that in the second year after the vintage the employer, from stress of circumstances, would be compelled to sell. He would then have paid twenty

dollars for wine that only brought, say, twelve dollars. Again, if he only paid twelve dollars, then what must he pay the laborers who are now producing new wine, which he is compelled to sell for ten dollars? Will the latter grant that ten dollars is a just wage of labor when others receive twelve dollars for exactly the same labor?

Again, we will take a case in which all possible exploitation by a capitalist employer is eliminated. Five laborers enter into a co-operative agreement to construct a machine. We will assume that it takes five years to complete the machine, and that at the end of that time it is sold for five hundred and fifty dollars. As they conduct the enterprise without help from any one else, they will at the end of five years be able to divide among themselves the entire value of the product, or five hundred and fifty dollars. Let us bring this into a little closer correspondence with actual life by saying that one man mines the ore, coal, limestone, etc.; another smelts these and runs the iron into pigs; another makes the necessary patterns; another the castings; while the last does the work in the machine-shop in the completion of the machine. As these processes are necessarily consecutive, we can assume that each takes one of the five years necessary for the completion of the machine. Now, under these circumstances, how are we to determine how much of the five hundred and fifty dollars each man should receive when the machine is completed and sold? If

we say they should receive one-fifth each, or one hundred and ten dollars, and attempt so to divide the total value, we at once find ourselves in serious trouble, for while the machinist would be satisfied, the miner is likely to make vigorous protest against the gross injustice of any such division, for he receives one hundred and ten dollars four years after the completion of his work, while the machinist is paid the same amount, one hundred and ten dollars, upon the completion of his work. But suppose that, despite such protest, society should insist upon this mode of distribution, what would result? So long as it remained true that men prefer present goods to future goods, all men would seek to enter those industries or branches of employment that turned out finished products. This must force down the wages in such industries as compared with those more remote from the finishing process until a sufficient premium were established to induce men to engage in these latter industries. In other words, though there were no capitalist to exploit the laborer, interest must arise in order to satisfy that "idea of pure justice" to which Rodbertus has appealed in his attack upon interest."

In passing upon the work of the socialist, it must be remembered that their errors are due in no small degree to the defective analysis of the orthodox economists. Profits and interest are so frequently employed by the latter writers as interchangeable terms, that it is hardly to be wondered at that the socialists

should direct their attack against the whole complex return secured by the capitalist. Later investigations have shown that in this total or complex return for the use of concrete forms of capital there are several different forms of surplus,—rent, profit, and interest. And that no matter how open the first two of these forms may be to the line of attack employed by socialist writers, the last is absolutely impregnable against such attacks, and this for the reason that it is a case of normal value, and so is determined under conditions of ideal free competition.

The importance of the work done by the socialist writers lay largely in their vigorous protest against the assumption of an economic man, the iron law of wages, etc. Their constructive contributions to economic theory, however, should not be ignored. The accent which they have thrown upon the intimate connection that exists between the phenomena of value and price on the one side and the phenomena of distribution on the other is important. Again, as I shall endeavor to show in a later chapter, it was Marx who first recognized the important distinction between labor in the concrete form of spinner, weaver, etc., and labor conceived as an abstract mobile fund. The similarity between capital and labor in this respect Marx, of course, failed to notice, but that he had some grasp of these two conceptions of labor can, we think, be shown. These are the conceptions which J. B. Clark has developed with such skill and clearness.

CHAPTER III.

THE USE THEORY OF INTEREST.

THE advocates of the Cost Theory of Value held that under free competition the value of a product cannot exceed its cost of production, from this it follows that the value of the share of this product which is due to the use of capital cannot exceed the value of that capital. This raises the question, How, then, are we to explain the fact that the share of the product that goes to the owner of capital frequently contains a surplus above the value of the capital itself, a surplus to which the name interest has been given? In attempting to explain this seeming contradiction the question arose whether there was not some other sacrifice than that represented by the capital itself. If there is such an additional sacrifice, it might be equated to this surplus value or interest. In that case the Cost Theory would still remain true, since the value of the product would again equal its cost of production. The search for this additional sacrifice has resulted in two distinct theories of interest,—the Use Theory and the Abstinence Theory. It is to an examination of the first of these theories that the present chapter will be devoted.

The Use Theory asserts, in brief, that in capitalistic production there is a sacrifice not only of the

material substance of capital but also a sacrifice of the *use* of the capital during the period of production.

This theory had a large following, especially among the abler German economists,—Herman, Nebenius, and others giving it their support. Its best and fullest statement is found in the work of the brilliant Austrian economist, Carl Menger. His approach to the question is, however, somewhat different from that of the earlier writers, since he starts out from the stand-point of the Marginal Utility Theory of Value. But for this very reason it is undoubtedly the best possible statement of the Use Theory of Interest.

80. Menger's Statement of the Theory. — This writer first holds that in value the causal relation is not, as the older economists held, from value of productive goods to value of product, but from value of product to value of productive goods. It must, however, be borne in mind that whichever order is accepted, it still remains true that, under free competition, the value of the product and the value of the productive good are necessarily equal. How, then, can the existence of surplus value or interest be explained?

To this Menger gives the following answer: "The transformation of means of production into products (or, shortly, Production) always demands a certain period of time, sometimes long, sometimes short. For the purpose of production it is necessary that a person should not only have the productive goods at

his disposal for a single moment inside that period of time, but should retain them at his disposal and bind them together in the process of production over the whole period of time.

"The use of capital, or the disposal over capital, thus described, in so far as it is in demand and is not to be had in sufficient quantity, may now obtain a value, or, in other words, may become an economical good. When this happens, as is usually the case, then, over and above the other means of production employed in the making of a concrete product (over and above,—*e.g.*, the raw materials, auxiliary materials, labor, and so on), there enters into the sum of value contained in the anticipated product the *disposal* over those goods that are required for the reduction or the *use* of capital. And since, on that account, in this sum of value there must remain something for the economical good we have called 'use of capital,' the other means of production cannot account for the full amount of the value of the anticipated product. This is the origin of the difference in value between the concrete capital thrown into production and the product; and this at the same time is the origin of interest."

This theory clearly rests upon the contention that there is a *use* of capital which is separate and distinct from that which is involved in the *using* up of the capital itself. It, therefore, follows that if this position cannot be maintained, the whole theory must be abandoned.

81. Criticism of Menger's Statement.—This theory seems to find some confirmation in our experience with durable consumption goods; as in the case of a rented house. The house itself or the capital is returned to the owner at the expiration of the lease, in spite of the fact that it has been a source of income during the entire period of the lease; it would here seem that there is a use of the house which is quite distinct from the using up of the house.

If, however, the case of a more perishable good, as a plough, is examined, there is no difficulty in seeing that just as the rendering of services by the laborer involves a using up of human tissue, so the rendering of services by a material commodity involves the using up of its tissue. The only difference between the cases of perishable and durable goods lies in the fact that the perishable goods are more rapidly consumed. A moment's consideration will make it clear that even in the case of the more durable consumption goods there is of necessity the same breaking down of tissue. They do not render all of their services at once, as in the case of powder, but instead only a small part of their possible services are given off at a time, while a balance, so large that it seems to be the whole, remains in the possession of the owner. It is this fact that seems to give warrant to the assumption that there is a use of capital that can be separated from the using up of the capital. And yet one has only to consider it well to realize that there is no conceivable *use* of any form of capital, not

even the most durable, that does not involve a using up of that capital. As Böhm-Bawerk has well said, "Any use of material goods which does not consist in the receiving from them of useful results due to their inherent powers or forms of energy is absolutely unthinkable."

Yet, despite the complete breaking down of the Use Theory, when critically examined, it had one great merit. It accented the importance of the *time element* in all capitalistic production. This proposition will be fully developed in the discussion of Time and Space Utilities, page 183. For the present it should be noted that, whatever the shortcomings of the Use Theory may be, it must be credited with a clear appreciation of this time function in the problem of interest.*

* Those desiring a fuller review of the "Use Theory" than is here given are referred to Böhm-Bawerk's "Capital and Interest," Book III.

CHAPTER IV.

THE EARLIER PRODUCTIVITY THEORY OF INTEREST.

I. CONTINENTAL WRITERS FAIL TO SEE THAT INCREASE IN PRODUCT DOES NOT NECESSARILY MEAN AN INCREASE IN VALUE.

82. Say.—Among the first to give definite statement to this theory was J. B. Say, who wrote: "The impossibility of obtaining a product without the co-operation of some form of capital compels the consumer to pay for that product a price sufficient to allow the entrepreneur, who takes on himself the work of production, to buy the services of that necessary instrument."* Again, he writes: "If capital had not in itself a productive power, independent of the labor that has created it, how could it be that capital, to all eternity, produces an income independent of the profit of the industrial activity which employs it?" †

That in some way a surplus accrues to the benefit of those that control this particular instrument of production is, of course, granted by all parties to the discussion; but the question is, How does this surplus arise? Nor is it a satisfactory answer to tell us that since "capital to all eternity produces an income," therefore capital must be productive. For the so-

* Traité d'Economie Politique, p. 395.

† Ibid., p. 71.

cialist might answer that the capitalist secures a surplus by exploiting the laborers under the protection of law and custom. Yet despite this serious ellipsis in Say's argument his views obtained wide acceptance in both France and Germany.

83. Riedel.—Among Germans, Riedel writes: "The productivity which capital when employed universally possesses is manifest, in observation of the fact that material values which have been employed, with a view to production, in aiding nature and labor are, as a rule, not only replaced, but assist towards a surplus of material values, which surplus could not be brought into existence without them. . . . The product of capital is to be regarded as that which in any case results from an employment of capital towards the origination of material values, after deduction of the value of that assistance which nature and labor afford to the employment of capital. . . . It is always incorrect to ascribe the product of capital to the working forces of nature or labor which the capital needs in order that it may be employed. Capital is an independent force, as labor and nature are, and in most cases does not need them more than they need it." *

The point of paramount importance in these passages is found in the opening statement, that the productivity of capital is manifest on observation of the

* National Oekonomie oder Volkswirthschaft, 1838. (1 § 366.)

surplus value, which could not be brought into existence without this capital. One is here constrained to ask, How do we get this surplus value? Surplus of material commodities may be granted, but how is this transmuted into a "surplus of material values"? This, indeed, is the crucial point in this whole discussion, yet it is one which these continental writers failed even to raise. They show, and have no trouble in showing, the productivity of capital in terms of physical commodities, but nowhere do they attempt to show how or why this is equivalent to an increase in value. They simply assume this step in the argument.

It does not meet the difficulty to say that, as a matter of fact, the employment of capital usually results not merely in a surplus of commodities but as well in a surplus of value. The question that troubles us is not one of fact, but the reasons for this fact, or the explanation of the process by which this fact is realized. When we say the productivity of capital is manifest from the observation of the existence of surplus value, we simply avoid the real difficulty in the matter. The only thing assured in the so-called productivity of capital is the increase in commodities. But that this does not necessarily imply an increase in value is manifest, for with the increase of commodities there is usually a corresponding decrease in marginal utility or of value, as we ordinarily use this latter term.

Suppose, for instance, that in the present condition

of the shoe industry a given amount of labor would produce one hundred pairs of shoes, and that with this supply on the market shoes would have a marginal utility of 10. Later, a new machine is introduced, so that with the same amount of labor we can produce two hundred pairs of shoes. Let us further assume that with this supply shoes will have a marginal utility of 4. Here, then, we would have a very positive increase of commodities with an equally serious decrease in the marginal utility or value per unit. It is true that there is still another sense in which the term value is employed,—namely, total value. But it may readily happen that even this may decline with the increase in quantity. For—

$$100 \times 10 = 1000 \text{ units of total value.}$$
$$200 \times 4 = 800 \text{ units of total value.}$$

In other words, the increase in commodities has resulted not only in a decline in marginal utility, or value per unit, but likewise in a decline of total value, so that in no sense has there been an increase in value.

So far, then, as these earlier writers are concerned, they have nowhere shown the existence of a surplus value due to the productivity of capital. They have no difficulty in showing a surplus in material commodities, but they have not shown, nor can they show, that this necessarily results in an increase of value. Men may increase their product to any extent they please, but unless there is some cause for a limitation of the supply of

these commodities, there can be no increase in value.

II. ENGLISH WRITERS SAW THAT INCREASE IN PRODUCT DOES NOT NECESSARILY MEAN AN INCREASE IN VALUE, BUT FAILED TO SUPPLY THE ELLIPSIS IN THE ARGUMENT.

In England Lauderdale and Malthus attempted to fill out the ellipsis in the arguments of the continental adherents of the productivity theory of interest by inserting a middle term that would serve to connect surplus product with surplus value.

84. Lauderdale.—This writer tells us that "In every instance where capital is so employed as to produce a profit it uniformly arises either from its supplanting a portion of labor which would otherwise be performed by the hand of man, or from its performing a portion of labor, which is beyond the reach of the personal exertions of man to accomplish.

"Suppose, for example, one man with a loom should be capable of making three pairs of stockings a day, and that it would require six knitters to perform the same work with equal elegance in the same time; it is obvious that the proprietor of the loom might demand for making his three pairs of stockings the wages of five knitters, and that he would receive them; because the consumer by dealing with him rather than the knitters would save in the purchase of the stockings the wages of one knitter."*

* Inquiry into the Nature and Origin of Public Wealth, pp. 161, 165.

It is in this saving of labor, then, that this writer would find the middle term, or his explanation of interest on capital. But the question may well be asked, Has he really said anything bearing upon that form of surplus value which here interests us? He has shown that the capitalist will receive a surplus value over and above his labor cost of production, but as this surplus includes the wear and tear of capital, it is not a surplus of value over and above the maintenance of the original capital. In other words, it is not interest.

Lauderdale seems to feel in a vague way the unsatisfactory nature of his solution, for he says, "The small profit which the proprietors of machinery generally acquire, when compared with the wages and labor which the machine supplants, may perhaps create a suspicion of the rectitude of this opinion. Some fire-engines, for instance, draw more water from a coal-pit in one day than could be conveyed on the shoulders of three hundred men, even assisted by the machinery of buckets; and a fire-engine undoubtedly performs its labor at a much smaller expense than the amount of the wages of those whose labors it thus supplants. This is, in truth, the case of all machinery."

But this, he says, is simply due to the fact "that the profit obtainable for the use of any machine must be regulated by the universal regulator of prices, the relation of supply and demand." In other words, if every one is free to produce such an

engine, its value cannot exceed its cost of production.

But it might be asked, if free competition presses down the value of the machine, will it not also press down the value of the products of that machine? For as long as the machine yields a profit other machines will be produced and their products increased until this profit disappears. The real question at issue is, Why does this competing process cease while there still remains that portion of this profit which we call interest.

85. **Malthus**, who in general follows Lauderdale quite closely, seems at times to have recognized this weakness in the argument, and to feel that in the formation of interest there was more to be considered than the productivity of capital. He sees that competition must always leave a share for the capitalist, or, in other words, that profit in the sense of interest is an essential part of the cost. He sees that over and above the direct sacrifice of labor there is another form of sacrifice which is endured by the capitalist, and which he will not endure without compensation. In other words, Malthus goes behind the limitation of the supply of capital to inquire as to the cause of this limitation. For he urges that "the gradual diminution in the rate of profit must in the long run bring the power and the will to accumulate capital to a stand-still." *

* Principles of Political Economy, p. 303.

But in his apprehension of this truth Malthus is not very persistent. For the most part he contents himself, as did Lauderdale, with the explanation that the rate of profit was a question of supply and demand, and only on rare occasions does he trouble himself to go back of this and inquire what it is that limits this supply.

86. Ellipsis in the Argument of the Advocates of Productivity.—It seems, then, that the various attempts to formulate a productivity theory of interest have either assumed that the employment of capital necessarily resulted in an increase in value, or have noted that it resulted in an increase in commodities, and have then assumed that this was the same as an increase in value. None of them have succeeded in supplying the ellipsis between these two phenomena. In other words, they have failed to show the creation of a surplus of value over and above the amount necessary to maintain the existing supply of capital.

III. INCREASE IN PRODUCT IS NOT A NECESSARY CONDITION OF INTEREST.

87. Böhm-Bawerk fails to recognize the Cause of the Confusion.—Böhm-Bawerk's criticism of the various attempts to formulate a productivity theory of interest is in many respects most admirable. He, however, fails to recognize the ultimate source of all their difficulties,—the unwarranted assumption that increase in product is a necessary condition of in-

terest. He accents the physical productivity of capital so strongly that it even seems to be an essential condition of his own theory of interest. That he is in error on this point we hope to show on pages 209 to 211. For the present we must content ourselves with urging that the physical productivity of capital, in the sense of an increase in quantity of product, though a frequent incident, is not a necessary condition of the phenomenon of interest.*

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* It will hardly be necessary to call attention to the fact that in this review of the various theories of interest we have drawn very freely upon Böhm-Bawerk's "Capital and Interest."

CHAPTER V.

THE ABSTINENCE THEORY OF INTEREST.

Both Smith and Malthus seem to have had some conception of the abstinence theory of interest. Smith writes: "In all countries where there is tolerable security every man of common understanding will endeavor to employ whatever stock he can command in procuring either *present enjoyment or future profit.*"* Again, Malthus writes: "The gradual diminution in the rate of profit will in the long run bring the power and the will to accumulate capital" to a standstill.†

88. Senior's Statement of the Theory.—The above antithesis was seized upon by Senior when, some years later, he elaborated the now well-known "Abstinence Theory of Interest." He writes: "The conduct of a person who either abstains from the unproductive use of what he can command, or designedly prefers the production of the remote to that of the immediate results," etc.‡ Senior, however, does not include capital among the primary factors of production, but holds that it is a product of the factors labor, natural agents, and abstinence. In

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* Wealth of Nations, Book II. Chap. I.

† Principles of Political Economy, p. 303.

‡ Outlines of the Science of Political Economy, p. 58.

other words, it is not capital but abstinence that is the original factor, since it stands in the same relation to interest that labor does to wages.

In our review of the Use Theory of Interest we saw that the capitalist usually secures not only the return of his original investment, but in addition a surplus in value, to which the term interest is applied. This seemed, however, to conflict with the contention that value is determined by cost. The advocates of the Use Theory endeavored to get over this difficulty by insisting that besides the sacrifice involved in the *using up* of capital there was an additional sacrifice of the use of the capital during an interval of time. This latter *use* of capital, which they regarded as a separate and distinct sacrifice from the *using up* of capital, they equated to the surplus in value or to interest. The advocates of the Abstinence Theory have endeavored to account for this surplus value by equating it to the disutility or sacrifice of abstinence. If men make a sacrifice by postponing present enjoyment, and devote the resources so spared to the purposes of production, it is manifest that the resulting increase in product is very intimately connected with the saving which made possible the adoption of the more productive methods. In other words, the cost of production must include not only the labor and capital that is *used up* in the process of production, but also the disutility involved in the postponement of present enjoyment, or, in brief, abstinence. The surplus

value that results from capitalistic methods of production is in this way equated to a disutility and the law of cost is maintained in its integrity. Here, in a very brief way, we have the statement of a theory that has provoked the most violent denunciation on the part of socialist writers and the less violent but equally pronounced opposition of the Austrian economists?*

89. **Lasalle's Philippic.**—It was against this theory that Lasalle launched the oft-quoted philippic,—"The profit of capital is the 'wage of abstinence.' Happy, even priceless expression! The ascetic millionaires of Europe! Like Indian penitents or pillar saints they stand; on one leg, each on his column, with straining arm and pendulous body and pallid looks, holding a plate towards the people to collect their wages of abstinence. In their midst, towering up above all his fellows, as head penitent and ascetic, the Baron Rothschild! This is the condition of society! how could I ever so much misunderstand it?"† This on the part of the well-meaning but seldom well-tempered champion of the masses may readily be pardoned, but that the Austrian economists who insist so strongly upon the importance of the *marginal* concept in economic theory should find anything to commend in this ill-considered tirade is somewhat surprising.

* It may be well to call attention to the important part played by the theory of value in these discussions of the theory of interest.

† Capital and Interest, p. 276.

90. Böhm-Bawerk's Contention.—And yet Böhm-Bawerk has written: "It is just as certain—and on this ground Lasalle is for the most part right as against Senior—that the existence and the height of interest by no means invariably correspond with the existence and height of a sacrifice of abstinence. Interest, in exceptional cases, is received where there has been no individual sacrifice of abstinence. High interest is often got where the sacrifice of abstinence is very trifling, as in the case of Lasalle's millionaire, and low interest is often got where the sacrifice entailed by the abstinence is very great. The hardly saved sovereign which the domestic servant puts in the savings-bank bears, absolutely and relatively, less interest than the lightly spared thousands which the millionaire puts to fructify in debenture and mortgage funds. These phenomena fit badly into a theory which explains interest quite universally as a 'wage of abstinence,' and in the hands of a man who understood polemical rhetoric so well as Lasalle they only furnished so many pointed weapons of attack against that theory." *

91. Reply to Böhm-Bawerk.—It is manifest that we have only to apply this same sort of criticism to the utility theory of value to show that it likewise is untenable. How can you say that value is determined by utility when, by confession, all the earlier increments yield a higher utility than those consumed

* Capital and Interest, p. 277.

later on? Shall we not, then, reject the proposition that value depends upon utility? As a matter of fact we do nothing of the kind, but continue to insist that value depends upon *marginal utility*. So, too, interest is not determined by the abstinence or lack of abstinence of a Rothschild, but by the abstinence or disutility endured by the *marginal* saver. For it is his sacrifice of present enjoyment that determines the creation of an additional supply of capital.

92. Another Objection to the Abstinence Theory. —Böhm-Bawerk has still another objection to the abstinence theory. He writes: "I consider it a logical blunder to represent the renunciation or postponement of gratification, or abstinence, as a second independent sacrifice in addition to the labor sacrificed in production." ("Capital and Interest," p. 278.)

"In any case it appears to me obvious that, in reckoning the sacrifice made for any economic end, the direct sacrifice in means—that sacrifice which is first made—and the indirect sacrifice that takes the shape of other kinds of advantage that *might* have been obtained in other circumstances by the means sacrificed, can be calculated only alternately and never cumulatively. I may consider the sacrifice of my pleasure trip to be *either* the thirty pounds which it has directly cost me, or the Persian carpet which it has indirectly cost me, but never as the thirty pounds and the carpet. Just in the same way our rustic may consider, as the sacrifice which the catching of three

fish costs him, either the day's work directly expended, or the three hares indirectly sacrificed (or, say, the gratification he gets from eating them), but never the day's work *and* the gratification obtained through shooting the hares. So much, I think, is clear." (Page 279.)

On page 283 we find this argument put in a little more definite form: "Suppose we feel the pain of a day's labor as an amount which may be indicated by the number 10. We actually employ the day in catching three fish, and these fish give us a gratification expressed by the number 15. . . . What our three fish cost us in this case is the labor-pain, indicated by the number 10. . . .

"If, on the other hand, it is possible, by laboring for a day at other kinds of work, to get a gratification greater than the pain represented by the number 10, if we could, *e.g.*, by a day's shooting, obtain three hares of the value of 12, then it is quite reasonable to expect that we would not in any case remain idle, but possibly go shooting instead of fishing. What our fish really cost us now is not the positive labor-pain expressed by the number 10, for this we should have undergone at any rate, but the negative loss of an enjoyment which we might have had, indicated by the number 12. But, of course, we must never calculate the want of employment and the pain of labor cumulatively; for if we had not preferred catching fish, we could not have spared ourselves the pain of labor and yet have had the gratification of

shooting. And just as little, if we choose to fish, do we by that choice make a double sacrifice." *

93. Reply to this Objection.—If the *utility* which might have been secured by hunting for hares is 12, then it follows that this 12 represents the total possible sacrifice incurred in securing the fish. In other words, we cannot add to this either 10, the pain of labor, or any part thereof. If this is what Böhm-Bawerk intends to say, I am in entire agreement with him. But when he writes that "if the *work* is reckoned as sacrifice, there cannot be added to that in the calculation the smallest fragment of the other kinds of enjoyment that were renounced" (page 280), I am compelled to part company with him. He seems to regard this proposition as the converse of the previous one, in which he declares that if the sacrifice is estimated in terms of the gratification which might have been got through the work, then not the smallest portion of the work itself can be reckoned in the sacrifice. As a matter of fact, they are essentially different propositions. For if the sacrifice is measured in terms of the postponed gratification, 12, no addition is necessary or possible, but if it is estimated in terms of the pain of labor, some addition is both possible and necessary. The postponed gratification of 12 is clearly resolvable into the pain of labor of 10, and an additional allowance of 2 for the gratification which might have been

* Capital and Interest, p. 284.

secured by hunting for hares. Hence, if *work* is reckoned as sacrifice, we must add to the pain of labor, 10, an additional amount, 2, if we wish to know the total sacrifice.

In other words, it is not a necessary interpretation of the abstinence theory to say that to the pain of labor you must add the *total* pleasure which would have been obtained by the immediate consumption of the capital. What the abstinence theory does say is, that to the pain of labor we must add such an amount as will induce the marginal saver or capitalist to postpone his enjoyment; an amount that is much smaller than the total pleasure which might be derived from the immediate consumption of the prospective capital. And the reason that we must pay him something is, as Böhm-Bawerk has so well shown, that "in circumstances otherwise equal men prefer a present to a future enjoyment."

94. Still another Objection to the Abstinence Theory.—The Austrian economists have still another and, to their minds, a more serious objection to the abstinence theory. It is here, indeed, that they reveal the real animus of their opposition to this theory. Böhm-Bawerk writes: "The third fault of Senior's theory seems to be that he has made his interest theory part of a theory of value in which he explains the value of goods by their costs." (Page 285.) "Now, even admitting the correctness of this theory, the 'law of costs' avowedly holds only as regards one class of goods,—those which can be reproduced in

any quantity at will. In so far, then, as Senior makes his theory of interest an integral part of a value theory which is merely partial, it can only be, in the most favorable circumstances, a partial interest theory. It might explain those profits which are made in the production of goods reproduced at will, but logically every other kind of profit would escape it altogether." (Page 286.)

In a later chapter we shall endeavor to show that the only part of the old complex profit that can be included under interest is such as will arise under conditions of free competition, or that interest is a problem in normal value. If this is true, then the above objection to the abstinence theory falls to the ground, for the only portion of general profits which that theory is called upon to explain is such as is realized under conditions of free competition.

While the Austrian economists have failed to establish their several contentions against the abstinence theory of interest, it still remains true that any theory that takes cognizance of abstinence alone must fail to account in an entirely satisfactory way for the phenomena of interest. For it matters not how much a commodity may cost, it cannot have value unless it also serves some utility. Hence in any satisfactory theory of interest abstinence and productivity must needs supplement each other, and to these must be added some adequate explanation of the part played by *time* in the phenomenon of interest. Later on it will be shown that Böhm-Bawerk, in the most suc-

cessful attempt that has yet been made to construct a theory of interest, has taken cognizance of all three of these elements,—this despite his formal and somewhat vehement repudiation of abstinence as a factor in the determination of interest.

CHAPTER VI.

INTRODUCTION TO THE EXCHANGE THEORY OF INTEREST.

BÖHM-BAWERK, in the development of this theory of interest, devotes considerable space to the discussion of certain fundamental concepts which he regards as underlying the exchange theory of interest. Some acquaintance with this part of his argument is therefore necessary to a clear understanding of his discussion of the interest problem. Most text-books on economics reduce all possible manifestations of utility to three primary forms,—utilities of place, form, and time: utility of place, as when ice is transported from the rivers of Maine to Southern towns and cities; utility of form, as in the artificial production of ice; utility of time, as when ice is cut in winter and stored until the following summer. The only objection to this analysis is that it does not recognize the fact that the first and second of these utilities are at the bottom one and the same. Whether we transport the block of marble from the quarry or chisel off the unnecessary parts in fashioning it into a statue, we are in both cases creating space utilities, so that in reality there are but two fundamental forms of utility,—those of space and those of time.

95. Capital is concerned with Time Utilities.—It has been said that man in all his efforts simply

places things where the natural forces may operate upon them, and so, whether he grows wheat in Dakota and transports it to Liverpool, or hews from a block of marble a statue that delights mankind for centuries to come, he is but moving things or changing their space relations. In his productive activities, however, he seeks to minimize his own efforts by availing himself, as far as possible, of the natural forces around him. In doing so he is compelled to adopt capitalistic or roundabout methods of production. Here, as elsewhere, he can only gain power by a sacrifice of time, for it is a fact of every-day experience that the operations of these natural forces involves an appreciable interval of time. From this we are led to conclude, *a priori*, that while labor may have to deal primarily with space utilities, capital is in some way necessary to the securing of the time utilities, and hence that interest *per se* is a payment for such time utilities.*

Take the German forests, for instance, which were largely planted by man. The care or labor of man is here but an insignificant element in the growing value of the tree. In a qualified way it might be

* I have here followed the usual treatment of this part of the subject, and have assumed that the expenditure of labor force does not require an appreciable interval of time. In the discussion of the Normal Value Theory of Wages, page 290, it will be shown that this assumption is not true. The recognition of this fact necessarily results in a serious modification of the theory of wages.

said that man's labor was confined to placing the acorn in the ground under conditions favorable to its growth. For the rest, it must largely be credited to nature herself. Yet this growing tree and its consequent increase in value is just as truly capitalistic production as the manufacture of watches. The former instance, however, serves to bring out a little more clearly the fact that time is necessary if we are to avail ourselves of the natural forces that year after year add to the bulk and value of the tree.

Again, let us take the case of the wine that increases in value with the passing years. So far as labor is concerned, the productive operation is practically completed with the storing of the wine; yet as the years go by the forces of nature are operating upon this wine, making changes so subtle that chemical analysis can take no cognizance of them, but which the connoisseur recognizes, and for which he is willing to pay. Here, too, it is clear that while it is the free forces of nature that bring about this change, these forces do not work instantaneously. In other words, time is a necessary condition in the creation of this surplus value.

Nor is there any difficulty in seeing that the same condition exists in manufacturing processes; though there is a seeming complication, due to the facts, first, that the interval of time is frequently shorter, and second, that labor and nature are here contemporaneous in their operation. Yet, after all, the most complex machine is but a combination of levers, and

in every lever we only gain power by a sacrifice of time.

96. The Rationale of Machine Methods of Production.—It has just been shown that in the case of complex machines, as of the more simple tools, power is gained by a sacrifice of time. A brief inquiry as to the rationale of this machine method of production may help to still further clarify our ideas on this point. In the direct removal of rocks, etc., the necessary forces are much less easily controlled by man than are the forces necessary to the fashioning of the hammer and wedge. Again, just as the hammer and wedge were used in the struggle with the rock and similar impediments, so in the making of the hammer and wedge other tools are used more primitive still, it may be, but at least more easily manipulated, while in the production of these remote tools others are employed that are still more easily manipulated. In other words, every successful roundabout method of production involves the carrying back of the production process to forces of nature that are more and more readily controlled; at every step powers are invoked that are stronger and more cunning than the human hand; this means that there is a constant shifting of the burden of production from the costly labor of man to the harnessed powers of nature.

97. Machine Production not a Necessary Condition of Interest.—The employment of a machine or tool, however, is not a necessary condition of in-

terest; thus in the case of the German forests, this phase of the phenomena is almost entirely eliminated; and again in the case of aging wine and bleaching linen, the machine and tool play an insignificant part, though in the case of wine the storage vaults clearly take their place. From this it follows that wherever man and nature have cooperated in the production of a commodity which requires an appreciable interval of time to fully mature its value, the phenomenon of interest exists; and hence that under the term Capital must be included not only tools, machines, or plant in general, but also all intermediate products. It would seem from this that economists should have little difficulty in determining just what is meant by capital; and yet there is probably no term whose definition has given rise to more serious discussion.

98. The Definition of Capital.—We have already seen that in early times where loans were made rather for purposes of consumption than of production, the word capital came to signify the money loaned. Later on, Hume maintained that interest depends not on the supply of money but upon the stock of wealth of the community. Turgot made a still further advance and defined capital as the goods saved from consumption. But this, since it still included all wealth, was manifestly too broad a definition. Adam Smith took the next step, and distinguished capital from consumption goods or from wealth as a whole by saying that "capital includes the saved stocks,"

meaning by stocks those goods that are dedicated to production. He also saw quite clearly the difference between private and social capital, or that the sum of all the private capital might exceed the total social capital, since the former included claims upon the members of society, while the latter only included means of production.

Looked upon as a source of income, private capital is the more general, and was indeed the original concept. For the purposes of the economist, however, social capital is the all-important phenomenon, and it is largely to this that economists have sought to confine the term, and so have defined capital either with Adam Smith as "the produced means of production," or with Böhm-Bawerk as "the sum of intermediate products."

99. Difficulties encountered by this Definition.— Clear and succinct as these definitions appear to be, the moment we attempt to apply them considerable differences of opinion arise. Without entering into this discussion in any detailed way, it may be said that these differences are due to the difficulty encountered when we attempt sharply to distinguish between production and consumption goods. This, of course, is the difficulty that confronts all attempts at exact definition where we have to deal with such fluent phenomena. We know in a general way the difference between animal and vegetable life, yet who has succeeded in constructing definitions for these terms that will sharply distinguish between the lower

forms of animal and the higher forms of vegetable life, or, again, between life and non-life? In much the same way the phenomena of production and consumption are continuous, at least so far as the producing laborer is concerned. His consumption of food is, after all, but a point in the never-ending circle of production, and so from one point of view his food is a consumption good, while from another it is certainly a produced means of production. And so we find that while Jevons includes all capital under consumption goods, Böhm-Bawerk would limit the latter to goods in the hands of the consumer. For he writes: "Finished consumption goods in the hands of producers and merchants as (warehouse) stock should be regarded as capital," or productive goods, but the same goods in the hands of the consumer are consumption goods and not capital. If we must draw an arbitrary line, this may be as good a point as any at which to draw it. Yet it would be difficult to show that the roundabout or capitalistic method of production stops at this point. Without dwelling upon the fact that delivery to consumers is part of the production process, it might be urged that goods may actually be delivered to the consumers long before the production process ceases. Böhm-Bawerk on more than one occasion refers to wine improving in quality and increasing in value with age, and indeed makes the explanation of this phenomenon the test to which all interest theories should be subjected. That this improvement in quality and increase in

value frequently takes place in the cellar of the consumer cannot, of course, be denied. And yet when this writer holds that "finished consumption goods in the hands of producers and merchants as (warehouse) stock should be regarded as capital," he, by implication, excludes such goods from this category if they are in the possession of the consumers.

From this we are led to conclude that while for convenience it may be well to draw the line between production and consumption, between capital and non-capital goods, at the point of delivery to consumers, yet this, after all, is but a conventional distinction. As long as goods are increasing in value, or rather as long as the lapse of time is a necessary condition to the realization of their full value, they are part of the world's capital stock whether in the hands of producer or consumer. It would seem, therefore, that we must not insist on too great precision when we come to apply our definition of capital to the concrete phenomena.

CHAPTER VII.

THE EXCHANGE THEORY OF INTEREST.

THE Exchange Theory of Interest rests upon the familiar experience that men generally prefer a present to a future enjoyment. This finds statement in the proposition that present goods are, as a rule, worth more than future goods. From this it results that he who exchanges present for future goods will demand some *agio*, some surplus in value, or, in brief, interest.

It has just been shown that all production goods are part of capital, and that they cease to be capital the moment they have fully matured their value as consumption goods. From this it may readily be inferred that interest must in some way be equated to that difference in value between production and consumption goods which emerges with the lapse of time; or again, in Böhm-Bawerk's terms, interest is the difference in value between present and future goods.

The terms present and future goods are somewhat unfortunate. Not the least of the difficulties in which these terms involve us is the fact that under this classification "goods of remoter rank (production goods), although materially present commodities, are, economically, future commodities" according to Böhm-Bawerk's use of terms. Nor does any neces-

sity exist for confounding the discussion by introducing new terms when the terms production and consumption goods are entirely satisfactory for the purposes of the discussion. But as serious objections will hereafter be taken to parts of the argument by which Böhm-Bawerk would maintain his Exchange Theory of Interest, it will be necessary to follow him in the use of the terms present and future goods. The reader may avoid some of the confusion by always thinking of present goods as consumption goods and of future goods as production goods.

I. PRESENT GOODS ARE WORTH MORE THAN FUTURE GOODS.

"The very centre and kernel" of Böhm-Bawerk's theory of interest is the proposition that "present goods are, as a rule, worth more than future goods of like kind and number." It will be shown hereafter that this proposition is not of such generality as this writer would have us believe. It is sufficiently general, however, for the purposes of his theory interest; and our present task will be to inquire why it is true, or how it is that men have come to value present goods more highly than future goods.

100. Differences in Provision and Underestimate of the Future.—The productivity of capital is not, according to Böhm-Bawerk, the only cause of the higher valuation of present goods. In his analysis of the phenomena he finds two other sources of the higher valuation of present goods. One is the fact

that many men are less efficiently provided for in the present than they hope to be in the future; for this reason the marginal utility of present goods is relatively high. Again, even though the actual marginal utilities of present and future goods were the same, yet there is a tendency of mankind to underrate or discount anything in the future, due to the lack of vividness in our mental pictures of future phenomena; the present good, therefore, receives a higher valuation than is enjoyed by the future good at the present time. These two causes Böhm-Bawerk finds to be cumulative in their effect.

101. Roundabout Methods of Production.—It is a fact of common experience that roundabout methods of production are generally more profitable than direct methods. It is not, of course, denied that machines and processes frequently fail because they are too complicated or too roundabout in their mode of operation. Here, as elsewhere, the law of diminishing returns may be called into play. Yet it still remains true that capitalistic or roundabout methods are in general adopted, and this because, on the whole, they yield a greater return.

102. Technical Superiority of Present Goods.—It follows from what has just been said that if I have goods now in hand I can employ them in productive processes, and so secure that surplus which results from roundabout methods of production. In other words, present goods are more highly valued because of this productivity of capital. It was seen in the

discussion of the Productivity Theory of Interest that an increase in product is not necessarily an increase in value. Böhm-Bawerk endeavors, by a somewhat elaborate argument, to bridge this chasm; his success is, however, somewhat doubtful. He attempts to prove too much, to establish a general proposition when for the purposes of his theory the establishing of any such general proposition is entirely unnecessary. For the present, however, we will assume that his thesis is in a large measure true, sufficiently so, at least, for the purposes of his theory of interest. It should also be noted that, while he recognizes that the first two causes (Difference in Provision and Underestimate of the Future) are cumulative in their effect, he holds that this last cause (Technical Superiority) is alternate with them.

To sum up, interest is the difference in value between present and future goods. The superior value of present goods is due, on the one hand, to the difference in provision between present and future and the tendency of mankind to underestimate all future phenomena; on the other, to the productivity of capital. This in a very brief way is the Exchange Theory of Interest which Böhm-Bawerk has so ably developed.

CHAPTER VIII.

CRITICISM OF THE EXCHANGE THEORY OF INTEREST.

I. ARE PRESENT GOODS WORTH MORE THAN FUTURE GOODS?

"PRESENT goods," writes Böhm-Bawerk, "are, as a rule, worth more than future goods of like kind and number. This proposition is the kernel and centre of the interest theory which I have to present. All the lines of explanation, by which I hope to elucidate the phenomena of interest, run through this fact; and round it, both essentially and superficially, is grouped the whole of the theoretical work we have to do."* While the important bearing of this proposition upon the theory of interest will not be called in question in the present chapter, yet an endeavor will be made to show that the proposition is by no means of such generality as Böhm-Bawerk would lead us to suppose.

103. Admitted Exceptions to this Contention.— In this same connection Böhm-Bawerk writes: "The only exception occurs in those comparatively rare cases where it is difficult or impracticable to keep the present goods till a time of worse provision comes. This happens, for instance, in the case of goods subject to rapid deterioration or decay, such as ice, fruit,

* Positive Theory of Capital, p. 237.

and the like." (Page 251.) Again, on page 297, he writes: "Lastly, it very seldom occurs, and then never as regards present and future goods in general, but only as regards one particular kind of goods, that the relations of supply and demand are such that future goods obtain a higher price than present goods of the same kind, and that a premium in present goods must be paid for future goods. It will only happen in cases where, presumably, the relations of supply and demand in the future will be essentially more unfavorable than in the present, and where, at the same time, for personal or technical reasons, it is not possible to preserve the present ample stock till that future point of time when they are assured of a higher value. Suppose the case of a brewer whose ice-cellars are too small for his requirements. If in January he puts in as much ice as the cellars will hold and has still two hundred carts of ice over, he may be very willing to exchange these for two hundred carts of ice deliverable in August." In a footnote he adds: "Similar cases may perhaps occur after very abundant harvests, where the producers have not enough storage accommodation to secure the surplus." (Page 297.)

104. **Additional Exceptions.**—Now, I would urge that those instances in which "a premium in present goods must be paid for future goods" are by no means so rare as this writer would have us believe. The fact is brought out quite clearly in the following tables, which were taken without expurgation from a daily paper.

They are given at intervals of three months, and so display the course of prices during the entire year.

JANUARY 2.	APRIL 2.	JULY 2.	OCTOBER 2.
Wheat No. 2.	*Wheat No. 2.*	*Wheat No. 2.*	*Wheat No. 2.*
Jan. .80	April, .69⅞	July, .54¾	Dec. .90⅝
May, .83¾	May, .70⅝	Sept. .56⅛	May, .89½
July, .79⅝	July, .69¾	Dec. .58	
	Sept. .67¾		
Corn No. 2.	*Corn No. 2.*	*Corn No. 2.*	*Corn No. 2.*
Jan. .23⅛	April, .24⅜	July, .26¾	Oct. .27⅝
July, .26¾	July, .26	Sept. .27⅝	Dec. .29⅜
	Sept. .27⅛	May, .29⅞	May, .32¾
Oats No. 2.	*Oats No. 2.*	*Oats No. 2.*	*Oats No. 2.*
Jan. .16⅝	May, .17¼	July, .15⅛	Oct. .19⅛
May, .19¾	July, .18⅛	Sept. .15½	Dec. .19⅞
	Sept. .18¾	May, .18⅛	May, .22⅝
Mess Pork.	*Mess Pork.*	*Mess Pork.*	*Mess Pork.*
Jan. 7.47½	May, 8.60	July, 6.85	Oct. 8.20
May, 7.80	July, 8.67½	Sept. 7.02½	Dec. 8.32½
			Jan. 9.17½
Lard.	*Lard.*	*Lard.*	*Lard.*
Jan. 3.77½	May, 4.22½	July, 3.87½	Oct. 4.50
May, 3.95	July, 4.32½	Sept. 3.97½	Dec. 4.60
			Jan. 4.72½
Short Ribs.	*Short Ribs.*	*Short Ribs.*	*Short Ribs.*
Jan. 3.75	May, 4.65	July, 3.65	Oct. 4.95
May, 3.95	July, 4.67½	Sept. 3.77½	Dec. 4.80
			Jan. 4.77½

Under the quotations of January 2, we find that wheat purchased on that date for January delivery is worth only 80 cents per bushel, while wheat pur-

chased on the same date for May delivery is worth 83¾ cents per bushel. Corn purchased in January for January delivery is worth only 23½ cents, while corn purchased on the same date for July delivery is worth 26¾ cents, etc. In other words, in direct opposition to the contention that "present goods are, as a rule, worth more than future goods," we find that the quotations for future delivery are here in excess of the quotations for present delivery in every instance save those of wheat and short ribs in the October list.

105. **These Exceptions are not fatal to the Exchange Theory of Interest.**—Primarily, we have here a case of what Böhm-Bawerk has styled "Substitutionary Utility." With our price-list in mind, let us take the case of a grain speculator. From the best information he can get he concludes that the price of wheat in the coming May will be eighty cents. This, despite the fact that its present value is only seventy cents. Under these circumstances he decides to buy wheat now and sell it next May, when, as he hopes, the price will have advanced to eighty cents.

The question arises, What price will he now pay for wheat to be delivered to him or his assigns in May next? We answer, that he will pay, and will only pay the price of wheat for present delivery, or seventy cents plus the cost of carrying said wheat over to that future date. More than this he will not pay, since he can insure the future delivery by buying it now and storing it until May comes around. In other

words, the present value of wheat for a May delivery is a substitutionary value, made up of the price of wheat for present delivery plus the cost of carrying that wheat until the date of the future delivery.

Such a price-list is, of course, fatal to the general contention that present goods are, as a rule, worth more than future goods. Again, if this proposition is, as Böhm-Bawerk declares, the centre and kernel of the Exchange Theory of Interest, the above price-list would seem seriously to invalidate that theory. As a matter of fact, the theory stands, despite any such list, because that theory does not depend upon the establishing of the superiority of the present goods as a universal or even as a general proposition.

For while it frequently happens that "the relations of supply and demand in the future will be essentially more unfavorable than in the present," yet it happens even more frequently that this condition is reversed, in which case, of course, present goods will be more highly valued than future goods. Now, all that is necessary for a theory of interest is that this last condition shall be realized with sufficient frequency to furnish profitable employment for the available supply of capital in increasing the future supply of these present goods. As the supply of capital finds very positive limitations in the abstinence endured by the marginal saver, it is manifest that interest may arise, though the cases in which future goods are worth more than present goods are of frequent occurrence in our economic experience.

II. ABSTINENCE IN THE EXCHANGE THEORY OF INTEREST.

In the review of the Exchange Theory of Interest it was stated that, according to Böhm-Bawerk, there are three influences that tend to make present goods worth more than future goods. These are: difference in provision, underestimate of the future, and the technical superiority of present goods. In the review of the Abstinence Theory it was shown how strenuously Böhm-Bawerk had insisted upon the elimination of abstinence as a factor in the determination of interest; this, too, on the ground that "high interest" is often got where the sacrifice of abstinence is very trifling." *

106. Interest measured by Marginal Abstinence.—In reply to this last contention it was urged that here, as elsewhere, it is the *marginal* that is the determinant,—in the case under consideration, the abstinence or disutility endured by the marginal saver or capitalist. Nor does any elaborate argument seem necessary to show that, despite his formal repudiation of abstinence, Böhm-Bawerk has in reality taken cognizance of it in the first two of the above-named factors that tend to make present goods more highly valued than future goods.

107. Abstinence recognized in the Exchange Theory.—(*a*) DIFFERENCE IN PROVISION.—With regard to the first factor, it is manifest that the supply

* Capital and Interest, p. 297.

of goods is increased by capitalistic methods of production. The adoption of these roundabout or more productive methods is again dependent upon the supply of capital, and this in last resort upon the abstinence of the marginal saver. Or to put it in a different way,—if the supply of present goods was practically unlimited no disutility or abstinence would be involved in the postponement of the consumption of a part of such goods. In other words, it is because the supply of present goods is, for many people, very inadequate that abstinence from consumption is a disutility which men will not endure without the expectation of a greater return in the future.

(*b*) UNDERESTIMATE OF THE FUTURE.—Again, as Böhm-Bawerk has clearly shown, the effect of the second factor, "underestimate of the future," is cumulative with the first. The discounting of the future good has the same effect as increasing the "difference in provision." In other words, the reward of abstinence is discounted by our underestimate of the future. From this it follows that the abstinence or disutility which the marginal saver will endure, in the hope of securing that reward, must suffer a like diminution. As a result, the process of saving ceases earlier, the supply of capital decreases, the more productive methods are abandoned, and in last resort the supply of present goods is decreased. This process is continued until the difference in value between present and future goods is again

equated to the abstinence or disutility endured by the marginal saver. *

And so, despite Böhm-Bawerk's practical repudiation of abstinence in the earlier part of his work and his failure to take any formal cognizance of it in the final statement of his theory of interest, yet, as a matter of fact, he actually includes it in that statement, though under other and more cumbersome terms. That some recognition of the part played by abstinence is necessary to any complete solution of the interest problem will be made clear in the next chapter.

III. IS THE TECHNICAL SUPERIORITY OF PRESENT GOODS A NECESSARY CONDITION OF INTEREST?

108. Technical Superiority an Increase in Quantity of Product.—According to Böhm-Bawerk, the third and last factor which tends to make present goods worth more than future goods is the "technical superiority of present goods."

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* In one instance, though only in a foot-note, Böhm-Bawerk recognizes that he is here dealing with the disutility of saving (abstinence). In this note he writes: "Indirectly this effect will be strengthened by the fact that, through the undervaluation of the future utility, men will refrain from providing for the future so amply as they otherwise would have done. In other words, this underestimate acts to the prejudice of saving and accumulation of wealth and still further reduces the number of persons who have to throw an accumulated surplus of present goods on the market." ("Positive Theory of Capital," p. 259.)

Just what is meant by this is revealed in the following passage: "It is an elementary fact of experience that methods of production which take time are more productive. That is to say, given the same quantity of productive instruments, the lengthier the productive method employed the greater the *quantity* of products that can be obtained."

From this it is clear that the technical superiority which this writer has in mind is an increase in the *quantity* of products, and the task that he has set for himself is to show that this increase in the *quantity* of products necessarily results in an increase in value. In other words, he devotes the entire chapter on the technical superiority of present goods to an endeavor to supply that ellipsis between the increase in product and the increase in value which proved so fatal to the earlier productivity theories. ("Positive Theory of Capital," p. 260.) Again, he writes: "The statement of how the productivity of capital works into and together with the other two grounds of the higher valuation of present goods I consider one of the most difficult points in the theory of interest, and, at the same time, the one which decides the fate of that theory." (Page 277, foot-note.)

109. Defects in Böhm-Bawerk's Reasoning.—As against this I would urge, first, that the technical superiority of present goods is not an "independent cause of the higher valuation of present goods;" secondly, that the technical superiority of present goods does not necessarily result in an increase in

value, and thirdly, that the technical superiority of present goods is not an essential condition of interest.

(*a*) TECHNICAL SUPERIORITY NOT AN INDEPENDENT CAUSE OF VALUE.—Böhm-Bawerk writes: "Thus we get as a result of our digression the assured conviction of two things: first, that the productive superiority of present goods assures them not only a surplus in product, but a surplus in value; and, second, that in this superiority we have to deal with a third cause of the surplus value, and one that is independent of any of the two already mentioned."*

In criticising this statement some inquiry is first necessary as to the sense in which Böhm-Bawerk employs the term "independent." He writes:† "About the first two factors we know already: their effects are cumulative. . . . It is essentially different with the co-operation of the third factor. True, it also tends to strengthen the action of the other factors, but it does so alternatively, not cumulatively." That is to say, that factor which confers the greater advantage on present goods always stands out from the other as the active agent. Say, for example, that the first factor (the circumstances of provision), together with the second factor (that of perspective), taken cumulatively, would give present goods an advantage of thirty per cent., while the factor of productivity would give an advantage of twenty-five per

* Positive Theory of Capital, p. 270.

† Ibid., p. 273.

cent., we should not get a total advantage of fifty-five per cent., but of thirty per cent., the advantage being based on the stronger factor."

From this it is manifest that the writer regards the third factor as acting in the same direction as the other two. Again, though he holds that the three factors are not cumulative in their effect, he nevertheless maintains that they may vary in their effect, that one may be greater than the other; in which case, under the law of alternate values, the value is determined by the greater of the two. In other words, he seems to regard the third factor, the technical superiority of present goods, not as one of two or more variables that enter into the determination, but as an entirely independent and self-sufficient cause of the higher valuation of present goods, and so of interest.

Now, it is clear that the multiplication of commodities, if operating in entire independence of the other two factors, can at most only give rise to an increase in utility and not to an increase in value. The indefinite general concept of utility is only converted into the more definite concept of marginal utility or value by the limitation of the supply, and this is accomplished by abstinence or by the operation of the first two factors. In other words, we cannot have a valuation of thirty set by disutility, and a valuation of twenty-five set by utility, for we are here dealing with normal value or with the case in which marginal utility and marginal disutility must

coincide. How, then, can it be said that either factor is an independent cause of the higher valuation of present goods, and so of interest?"

(*b*) THE TECHNICAL SUPERIORITY OF PRESENT GOODS DOES NOT NECESSARILY RESULT IN AN INCREASE IN VALUE.—Since we here have to deal with a proposition which Böhm-Bawerk holds to be the "chief pillar" of his theory of interest, it will be well to let him state his own case somewhat in detail. He writes: "Suppose that, in the year 1888, we have command of a definite quantity of productive instruments, say, thirty days of labor, we may, in terms of the above proposition, assume something like the following. The month's labor, employed in methods that give a return immediately, and are, therefore, very unremunerative, will yield only 100 units of product; employed in a one year's process, it yields 200 units, but, of course, yields them only for the year 1889; employed in a two years' process it yields 280 units—for the year 1890—and so on in increasing progression: say, 350 units for 1891, 400 for 1892, 440 for 1893, 470 for 1894, and 500 for 1895."

If the month's labor is not employed in production until 1889 it would start in the same way with 100 units of product in 1889 and would increase in each succeeding year, but would only reach 470 units of product in 1895. In the same way a month's labor which is not employed in production until 1890 would start with 100 units of product in 1890, but would only reach 440 units in 1895. This is ex-

hibited by Böhm-Bawerk in the following tabulated statement:

A MONTH'S LABOR OF THE YEAR.

Yields for the economic period.	1888.	1889.	1890.	1891.	Units of Product.
1888	100	. .	. .	. .	
1889	200	100	. .	. .	
1890	280	200	100	. .	
1891	350	280	200	100	
1892	400	350	280	200	
1893	440	400	350	280	
1894	470	440	400	350	
1895	500	470	440	400	

From this it is manifest that if we take any particular year, say 1892, the month's labor which was first employed in 1888, or in a five years' process, will yield 400 units of product, while that which was first employed in 1889, or in a four years' process, only yields 350 units. And so, whatever year is taken, the longer production period yields the greater quantity of product. Böhm-Bawerk then proceeds to ask:

"But is it superior also in the height of its marginal utility and value? Certainly it is. For if, in every conceivable department of wants for the supply of which we may or shall employ it, it puts more means of satisfaction at our disposal, it must have a greater importance for our well-being. Of course, I am aware that the greater amount need not always have the greater value;—a bushel of corn in a year

of famine may be worth more than two bushels after a rich harvest; a silver shilling before the discovery of America was worth more than five shillings are now. But for one and the same person, at one and the same point of time, the greater amount has always the greater value; whatever may be the absolute value of the bushel or the shilling, this much is certain, that, for me, two shillings or two bushels which I have to-day are worth more than one shilling or one bushel which I have to-day. And in our comparison of the value of a present and a future amount of productive instruments the case is exactly similar. Possibly the 470 units of product which may be made from a month's labor in 1889 for the year 1895, are worth less than the 350 units which may be got from the same for the year 1892, and the latter, notwithstanding their numbers, may be the most valuable product which can be made out of a month of 1889 in general. In any case the 400 units which a man can gain by a month's labor of the year 1888 for the year 1892 are still more valuable, and therefore the superiority of the earlier (present) amount of productive instruments—here and everywhere, however the illustration may be varied—remains confirmed."

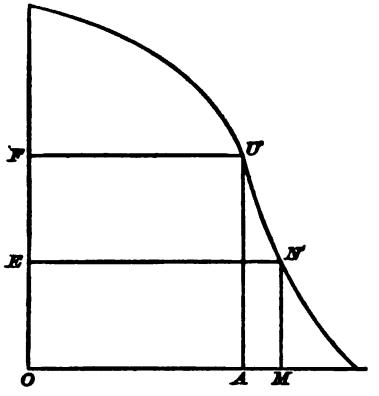
Now, while we here have an explicit recognition of the fact that "the greater amount need not always have the greater value," and this because of the decline in marginal utility, yet I would ask, has not Böhm-Bawerk ignored this fact in his final conclusion? For when he insists that the 400 units

which result from a five years' productive period must have a greater value than the 350 units which result from a four years' period, he clearly assumes that the marginal utility or value per unit remains unchanged despite the increase in the supply of the commodity from 350 to 400 units.

If the 50 units is but an insignificant part of the total supply, it may well happen that the addition of this amount will not appreciably affect the marginal utility or value per unit of the commodity. In this case the total value of the 400 units would, of course, be greater than the total value of the 350 units. But if the increase in quantity of product is a considerable part of the total supply of the commodity its marginal utility may suffer a rapid decline. In that event it might readily happen that the total value of the 400 units will be less than the total value of the 350 units would have been if we had contented ourselves with the shorter production period. Under such circumstances one who controls a large share of the total product might find it profitable to shorten the period of production, for the same reason that the Dutch East India Company destroyed a portion of their crops in years of over-abundant harvests. A glance at Fig 10, which was employed to illustrate this oft-quoted experience, will reveal the conditions under which an increase in product will result in an increase in total value. For since total value is the quantity of product multiplied by the marginal utility or value per unit, it follows that this total

value can only increase when the increase in product is greater than the decrease in marginal utility. In other words, Böhm-Bawerk has not only failed to show that the increase in quantity of product, which is the outcome of a longer period of production, will necessarily result in an increase in total value, but from the very nature of the case it is impossible to show any such necessary connection between an increase in quantity and an increase in value. But while their association may not be of universal or even of general occurrence, yet it may be realized with sufficient frequency to afford profitable employment for the available supply of capital. And I take it that here again this is all that is necessary for the purposes of Böhm-Bawerk's Theory of Interest.

Fig. 10.



(*c*) Technical Superiority of Present Goods is not an Essential Condition of Interest.—That the technical superiority of present goods in the sense of an increase in the *quantity* of product is not an essential condition of interest may be shown by reference to that good old example by which, as Böhm-Bawerk has said, "many an interest theory has been tested and found false." We refer, of

course, to the case of wine, whose value increases with its age. Here, as is manifest, the increase in value is entirely independent of any change in quantity or volume. The same is true of ice cut in January for use in July, and indeed of a host of other commodities. The case of ice is noted by Böhm-Bawerk, but is dismissed as exceptional and unimportant. Yet, rightly understood, this case will be found far more typical of the phenomena of interest than those manufactured goods in which there is a multiplication of commodities. As already noted, this writer accents the increase in commodities far too strongly. He thus loses sight of the fact that from the stand-point of the Marginal Utility Theory of Value, the typical cases of interest are those in which this phenomenon is entirely independent of any physical change in the commodity, or those in which the increase in value is determined from the side of the consumer rather than from the side of the producer,—by the growing demand rather than by the growing supply. For, while it is in a measure true that the greater value of ice in summer is due to the fact that its supply is more limited than in winter, it is equally true that this increase in value is in part due to the increase in demand that arises with the return of warm weather. In other words, the phenomenon of interest, or of surplus value, is here realized in its simplest form. The commodity is physically complete in quantity and kind, yet it still continues to grow in value, and that, too, as a

function of time. This manifestly holds true for all goods that are produced in anticipation of a market, for it is practically impossible amid the complications of modern industry to so time the process of production that the commodity will reach physical completion at the very instant that the consumer is ready to take possession of it. Unless this perfect adjustment in time is realized, the good must wait on the demand before it can develop its full value.

But, after all, the single case of wine is sufficient for the purposes of our argument. For it may fairly be urged that the exception which was sufficient to overthrow one theory of interest must be as strong against every other theory that fails to account for it in a satisfactory way. If the third factor, defined by Böhm-Bawerk as the multiplication of commodities, is a necessary condition of interest, then it is in order for the advocates of the Exploitation Theory of Interest to rule out the surplus value of aging wine as having no connection with the phenomenon of interest.

The confusion in this part of Böhm-Bawerk's argument seems to be caused, as we have already said, by the undue accent which he has thrown upon those cases where the phenomenon of interest is associated with an increase in the quantity of commodities. This has led to the tacit assumption that an objective increase of commodities is a necessary condition of interest. And yet it must be remembered that no one has insisted more strongly than the Austrians that economists have primarily to deal not

with commodities but with utilities, and that these utilities only become matters of economic interest when there is some limitation of their supply.

Nor is this defect in Böhm-Bawerk's treatment of the subject a mere question of accent, for he totally ignores those instances or conditions under which this surplus of value may arise without an increase in the quantity of product. In other words, the technical superiority of present goods is always restricted to an increase in quantity of product, and his entire discussion of this part of the subject is confined to an attempt to show that this increase in quantity will necessarily result in an increase in value. Again, this increase in quantity of product, or the technical superiority of present goods, is nowhere recognized as a frequent but unessential condition of interest. On the contrary, he declares that it is the "chief pillar" of his theory of interest (pages 264 and 270), just as he elsewhere declared that the superior value of present goods is the very "centre and kernel" of that theory. In conclusion, I can only hope that the limitations of this criticism of the Exchange Theory of Interest will be clearly recognized. For despite what has here been written, I believe that the essential elements of the Exchange Theory will stand impregnable against all assaults. In other words, it actually, if not formally, recognizes the three essential elements, productivity, time, and abstinence, and rightly holds that the phenomenon of interest involves an exchange of present for future goods.

CHAPTER IX.

THE MARGINAL PRODUCTIVITY THEORY OF INTEREST.

We have seen that Böhm-Bawerk prefaced his discussion of the "Exchange Theory of Interest" by an attempt to determine just what is meant by capital. It will therefore be necessary to compare his concept of capital with the concepts developed by Clark in his discussion of the Marginal Productivity Theory of Interest.

I. COMPETING CONCEPTS OF CAPITAL.

110. Capital as a Sum of Concrete Commodities.—Böhm-Bawerk, as we have seen, defines capital as the "sum of intermediate products." In other words, the only concept of capital that he has in mind is a sum of *concrete* commodities. It will now be shown that there is still another concept of capital, and one which, for the purposes of the theory of interest, is far more important than that to which he has called attention.

111. Capital as a Mobile, Homogeneous Fund.—We get some hint of this second concept as far back as Calvin's attempt to justify interest on the ground that the entrepreneur employs his borrowed capital in ways that yield him a larger return than the interest which he pays for the use of capital. That is

to say, the return secured by particular concrete forms of capital may be more than the general, average, or level return secured by capital throughout the whole range of industry. Any monopoly advantage that may exist attaches to the ownership of the concrete intermediate products, and so is secured by their owners; the capitalist being constrained to content himself with a non-monopoly retu[illegible]r with a normal rate of interest. This is the ra[illegible]d for capital conceived as a sort of abstract, mo[illegible]homogeneous fund capable of embodiment in an[illegible] form the entrepreneur may desire. This is interest *per se*.

Frequent statements may be found in economic literature which, if followed to their legitimate conclusion, would undoubtedly lead to this concept of capital, but it was not until J. B. Clark published his "Law of Wages and Interest" * that this thought was elaborated and given clear and definite statement. His contention is that it is not materials, machines, or buildings that the capitalist loans, but a sort of general draft upon society,—value in a readily convertible form; a sort of abstract fund which the entrepreneur converts into concrete intermediate products. Then, too, the embodiment of this abstract fund in various concrete forms is not a permanent transaction. Materials are used up; machines and plants wear out; but while doing so money is earned with which we can buy others. In this way, while

* Annals of American Academy, July, 1890.

the concrete intermediate products are continuously changing, the abstract fund remains intact.

Again, the money earned while the machines, etc., are wearing out may be invested in an entirely different kind of machine or in an entirely different industry. While an anvil cannot be transmuted into a loom or a forge into a woollen-mill, yet the capital originally invested in anvil and forge may be invested in loom and woollen-mill if the money earned by anvil and forge is sufficient to pay for loom and mill. It is in this way that capital may be taken out of the less productive and invested in the more productive industries. In other words, the capital which we here have in mind is not only an abstract but, as well, a mobile, homogeneous fund.

II. RATE OF INTEREST FIXED BY MARGINAL PRODUCTIVITY.

This brings us to the question, What do we mean by the general, average, or level rate of interest? Von Thünen long since declared that interest is determined by the return secured by "the last dose of capital" whose employment is economically permissible. This thesis is developed at considerable length by Clark, who writes as follows: "If population be fixed and pure capital increases, what must the new capital do?" To this he makes answer: "*It must take less and less productive forms of outward embodiment.*" Here, as elsewhere, value is determined by marginal utility. The entrepreneur will not pay more for one portion of the mobile, homogeneous fund

which he borrows from the capitalist than he can earn with the last portion. If the capitalist should insist on a greater return the entrepreneur would decrease the amount he would borrow, and a portion of the capitalist's funds would remain unemployed. "This means, in current scientific phrase, that the final utility of capital is reduced, and, by the most familiar of commercial principles, this fact reduces the market value of the whole supply. *General interest is gauged by the earnings of the instrument that the employer or initiator procures with the final increment of borrowed capital.*"

112. Clark on the Mobility of Capital.—"How this commercial principle, that price is governed by final utility, applies to capital we may see by a simple illustration. There might seem to be a difficulty in the case, arising from the fact that capital in its concrete forms is not homogeneous. The utility of the last increment of wheat clearly fixes the price of the entire crop; but the last bushel of wheat does not set the price of the last pound of wool. Why, then, should the utility of capital in the shape of paint-brushes set the loan rate of capital in the shape of ploughs? It does this, as we shall quickly see; and if we are willing to look a little more closely we shall see not only that the utility of the pure capital in the paint-brushes governs the price of the capital in the ploughs, but that the actual earnings of the less necessary implements, as they are used by employers, determine the earnings of the more necessary ones.

It is as though ploughs, spades, wagons, engines, oxen, paint-brushes, etc., were as homogeneous as kernels of wheat. We shall quickly see how this comes to be true.

"Let there be an isolated community living on an island of the sea with a due variety of natural products, and let a dozen families furnish the working force. Give to them now their first instalment of tools; it will take the shape of the instrument that is most needed, let us say an axe! If there be a capitalist in the case,—we care not for the present who or where he is,—he can get for his loan approximately what the axe adds to the product created by the community. Let him furnish now a second instalment of pure capital, or productive wealth, convertible into any form; can he get as much for it as for the first? He could do so if the second unit were as productive as the first, but it is not so. It must take the shape of an implement that is less sorely needed than was the axe, let us say a spade. It is the product that the spade adds to the gains of the community that gauges the reward of the capital embodied in it; and that product is less than was that of the axe.

"Why, however, may there not be two rates of interest, one for each of the units of pure capital? Is not the axe as necessary as ever? Why may not the owner of the capital that is embodied in it get as much as ever? Why may he not demand and get all that the employer and the community back of

the employer are willing to pay for having trees felled and wood split? Must a highly useful implement be degraded by the presence of a less useful one, and submit to be rated lower by the reason of its company? It must submit to exactly that. Its importance to the community is diminished by the presence of its inferior fellow-implement. If the axe were lost altogether, its work would now be carried on notwithstanding its absence. There was a time when the loss of an axe meant the cessation of wood-cutting; now it no longer means this; wood-cutting goes on, though something else stops.

"Tools themselves are not interchangeable; one cannot do the work of the other. The units of pure capital in them are interchangeable; one may do the work of the other, and all are, therefore, equally important. We may easily test this principle. The product of anything may be treated by supposing that it is annihilated and ascertaining how much the output of the working force is thereby diminished. As the second unit of pure capital is about to embody itself in the spade, let us destroy the axe. Will the community get on without this implement? If so, the loss is measured by the full amount of its productive power; but they will not do so; they will at once restore the axe. The unit of capital that was about to embody itself in a spade will now take the form of the more necessary implement, and the actual loss that the community suffers is that of the spade. By taking away the axe we have actually

forced the men to get on without a spade, and the loss inflicted on them is measured by the product of the spade.

"Let there be a third increment of capital, taking the shape of a saw. The work of all three will go on together, but the real importance of the units of capital in them will in each case be gauged by the efficiency of the saw. Remove at any time one of the more-needed tools, and the community will replace it by foregoing the one that stands in the series as last and least necessary. *Interest is paid not for concrete things, but for pure capital; and that passes freely from form to form, and is everywhere equally rewarded. It is as homogeneous in the abstract as wheat, and the price of it is as amenable as is the price of wheat to the law of final utility.*" *

It hardly seems necessary to add anything to this very able discussion except the following brief summary. It is here made clear, first, that there are two concepts of capital,—one as a sum of concrete instruments, and the other as the abstract, mobile, homogeneous fund, which finds embodiment in these concrete forms. Secondly, it has here been shown that interest is the return secured by capital under this latter conception. Thirdly, the rate of interest is determined by the marginal productivity of this mobile, homogeneous fund of capital, or by its product in the

* Law of Wages and Interest, pp. 5–13, Annals of American Academy, July, 1890.

least productive industry in which its employment is economically permissible.

A theory that thus limits the determination of interest to the very definite concept of the marginal productivity of capital, is, of course, a great advance upon the earlier and more indefinite productivity theory. But even yet we are far from the solution of the interest problem; for though it is true that interest may be measured in terms of the marginal productivity of capital, the question still remains, What fixes this margin? What determines the supply of capital? This problem will be taken up in the next chapter.

CHAPTER X.

THE NORMAL-VALUE THEORY OF INTEREST.

In the review of the various theories of interest that have from time to time been proposed, it was seen that the advocates of the Use Theory clearly recognized the important part played by the *time element*, while the Productivity and Abstinence Theories severally accented the importance of productivity and abstinence, or of utility and disutility. In the Exchange Theory there is a very marked advance upon all previous attempts to solve this problem, in that it clearly and formally recognizes that time and productivity are both essential conditions of interest; it also takes cognizance of disutility or abstinence under the headings of "Difference in Provision" and "Underestimate of the Future." It is true that in Böhm-Bawerk's development of this theory there is little to suggest that he was at all conscious of the fact that he had here reintroduced that abstinence which he so uncompromisingly repudiates in other parts of his work, but that he has so reintroduced it I hope I have succeeded in showing. Any logical inconsistency that may have resulted from his admission of abstinence or disutility as an essential element in the interest problem is more than balanced by the greater completeness and truth of the theory of interest which he has proposed.

I. INTEREST A PROBLEM IN NORMAL VALUE.

At the close of the preceding chapter it was urged that even the very definite concept of marginal productivity fails satisfactorily to explain the interest problem. It was also seen that we are here dealing with a mobile, homogeneous fund. From this it is an easy step to the further conclusion that we are here dealing with the conditions of free competition or with normal value, hence marginal utility and marginal disutility will here coincide and mutually limit each other. Given the productivity of capital, the marginal point is fixed by the supply of capital, and this in the case of the mobile, homogeneous fund of capital is limited by marginal disutility or abstinence. Hence it may be maintained that marginal productivity and marginal abstinence are of equal importance in determining the rate of interest.

113. The Source of Böhm-Bawerk's Error.—Let us now ask, How has it happened that Böhm-Bawerk has failed to recognize this most important truth? For one is seldom contented with convicting so acute a thinker of serious error unless it is seen just how he was betrayed into it. In the first place, I would urge that the concept of capital as an abstract, mobile, homogeneous fund is not one that lies on the face of things. Again, it must be remembered that Böhm-Bawerk approaches the question from the stand-point of the Marginal Utility Theory of Value, and that in the establishing of this theory he has

been at some pains to prove that scarcity values are the rule rather than the exception. With this fact clearly established, so far as concrete commodities are concerned, he passed over to the interest problem, and, having defined capital as a sum of concrete intermediate products, he could not well avoid the conclusion that interest is the return secured by capital as a sum of concrete commodities. From this it seemed to follow that a theory of interest which only accounted for the earnings of freely reproducible goods, an exceedingly limited share of all concrete commodities, must be a totally inadequate theory of interest. And so we found that Böhm-Bawerk's most serious objection to Senior's Abstinence Theory was that "he has made his interest theory part of a theory of value in which he explains the value of goods by their cost," hence "it can only be in the most favorable circumstances a partial interest theory. It might explain those profits that are made in the production of goods produced at will, but logically every other kind of profit would escape it altogether." *

The obvious answer to all this is, that the only form of profit to which we can apply the term interest is such as arises under free competition.

Böhm-Bawerk here follows the defective analysis or want of analysis of the older economists. He confounds the surplus which arises from the *monopoly* inherent in concrete forms with the *normal*

* Capital and Interest, p. 286.

surplus, which is the earning of capital as a mobile, homogeneous fund. If the familiar terms profit and interest are retained, then there is no escape from confusion except by restricting the former to the *monopoly* and the latter to the *normal* surplus. The retaining of these every-day terms by giving them a more definite and restricted meaning is, of course, attended with some disadvantages, nor is their retention a matter of serious concern. The all-important consideration is the recognition of the essential difference that exists among the three forms of surplus. On the one side rent or the price-determined surplus, on the other profit and interest or the price-determining surpluses. These last being distinguished from each other by the fact that one is a *monopoly* and the other a *normal* surplus. From this it follows that in the determination of the normal surplus or interest utility and disutility coincide: hence no theory of interest can be complete which does not recognize the part played by abstinence in limiting the supply of capital and so co-operating with productivity in the determination of the rate of interest.

114. Böhm-Bawerk's Confused Recognition of the Part played by Abstinence.—In fairness to Böhm-Bawerk it should be noted that he does occasionally recognize that abstinence plays a part in the determination of interest. He sees that the supply of productive goods is limited, and that it can all find employment in industries that will yield a surplus. This, of course, raises the further question, What

limits the supply of capital? Some answer to this question may be found in "Capital and Interest," page 276, where, after quoting Lasalle's brilliant philippic against the Abstinence Theory, Böhm-Bawerk continues, "This brilliant attack notwithstanding, I believe there is a core of truth in Senior's doctrine. It cannot be denied that the making as well as the preservation of every capital does demand an abstinence from or postponement of the gratification of the moment; and it appears to me to admit of as little doubt that this postponement is considered in, and enhances the value of those products that, under capitalist production, cannot be obtained without more or less of such postponement. If, *e.g.*, two commodities have required for their production exactly the same amount of labor, say one hundred days, and that one commodity is ready for use immediately that the labor is finished, while the other—say new wine—must lie for a year, experience certainly shows that the commodity which becomes ready for use later will stand higher in price than that which is ready at once, by something like the amount of interest on the capital expended." Yet, strangely enough, Böhm-Bawerk concludes, and in this same connection, that the Abstinence Theory fails because "high interest is often got where the sacrifice of abstinence is very trifling." This, too, despite the fact that in his discussion of value he has so strenuously insisted that the marginal is the determinant.

Again, he writes: "In making this calculation it

will not be overlooked that the institution of interest has its manifold uses; particularly as the prospect of interest induces saving and accumulation of capital, and this, by making possible the adoption of more fruitful methods of production, becomes the cause of a more abundant provision for the whole people. In this connection the much used and much abused expression 'Reward of Abstinence' is in its proper place. The existence of interest cannot be theoretically explained by it; one cannot hope in using it to say anything about the essential nature of interest; every one knows how interest is simply pocketed without any abstinence that deserves record." Here again his recognition of abstinence is confounded by his failure to recognize that it is *marginal* abstinence that enters into the determination of interest. This confused recognition of the part played by abstinence results in its practical repudiation in the earlier part of Böhm-Bawerk's discussion. He also fails to take any formal cognizance of it in the final statement of his theory of interest, though, as we have shown, he actually includes it in that statement, though under other and more cumbersome terms. That this recognition of the part played by abstinence is necessary to a complete solution of the interest problem is, of course, manifest the moment we recognize the fact that we are here dealing with normal value, or that it is capital as a mobile, homogeneous fund that earns the surplus value to which we have given the name interest. While the Aus-

trian economists are undoubtedly right in their contention that among concrete commodities scarcity values are the rule, yet when we come to capital as the earner of interest *per se*, we clearly recognize that we here have the conditions of ideal free competition, or those conditions in which, to use Marshall's phrase, marginal utility and marginal disutility "cooperate like the two blades of a pair of shears."

115. Statement of the Normal-Value Theory.—From this it follows that what we have to show in any theory of interest is not that the multiplication of commodities will necessarily result in an increase of values, but, first, that the roundabout methods give rise to an increase of utilities; and, secondly, that the supply of these utilities is relatively so limited *that the increase in utilities is coincident with an increase in value*, or, as Böhm-Bawerk has himself written, "*It is because the stock of present goods is always so low that the conjuncture for their exchange against future goods is always favorable.*" ("Positive Theory of Capital and Interest," p. 359.)

Again, he writes: "Now it can be shown, and with this we come to the goal of our long inquiry, that the supply of present goods *must* be numerically less than the demand. The supply even in the richest nation is limited by the amount of the people's wealth at the moment. The demand, on the other hand, is practically infinite; it continues at least so long as the return to production continues to increase with the extension of the production process, and that is a

limit which, in the richest nation, lies far beyond the amount of wealth possessed at the moment." (Page 332.)

Here, then, we have the ultimate facts in regard to interest. For while capitalistic methods eventually result in an increase of the supply of present goods, and so tend to decrease the value of such goods, yet human desires continue to outrun the supply of present goods, and as a result of this present goods are more highly valued than future goods. Again, the adoption of roundabout methods depends upon the increasing of the supply of capital. If this supply should be indefinitely increased, capital would be forced to find employment in less and less productive industries until it reaches those in which no surplus value can be realized. In other words, the supply of future goods would become so abundant that men would cease to value them more highly than present goods. Capital, however, is not thus indefinitely increased, and this for the reason that such increase involves the exchange by the marginal saver of a present for a future good. Hence, so long as man's desires outrun his powers of production, or so long as present goods are more highly valued than future goods, an exchange of the former for the latter involves a sacrifice or disutility. It is this that tends to restrain the increase in the supply of capital, and so the adoption of that capitalistic method of production whose ultimate effect is to decrease the value of present goods.

It is therefore not at all necessary to confound the discussion by an elaborate attempt to show that the increase in the quantity of commodity which results from the adoption of the roundabout methods will effect an increase in value. The explanation is, in simple, that man's desires so outrun his powers of production that, despite the increase in quantity of commodity due to the adoption of capitalistic methods, the supply of present goods is for many people so restricted that they give a higher valuation to these than to future goods.

If we wish to get back of this and inquire how the supply of capital and so the ultimate supply of present goods is thus limited, we can only answer that this increase in the supply of present goods depends in the first instance on an increase in the supply of capital. Again, this increase in the supply of capital involves an exchange of present for future goods, or the disutility of abstinence. Hence, in last resort, the productivity of capital and so the ultimate supply of present goods is restricted by the abstinence or disutility endured by the marginal saver or capitalist. That is to say, interest is a case of normal value; it may, therefore, be *measured* either in terms of marginal productivity or of marginal abstinence, but it can only be *determined* by the joint action of these two factors.

It is manifest that this does not conflict in any way with Böhm-Bawerk's thesis that interest results from an exchange of present for future goods. The

theory here proposed is, after all, but an extension of Böhm-Bawerk's analysis, and may be styled either the Exchange Theory or the Normal-Value Theory of Interest. But since the failure to recognize the normal character of the phenomena has led to some confusion, it has seemed well to adopt the name The Normal-Value Theory of Interest.

BOOK IV.—WAGES.

CHAPTER I.

THE WAGES FUND DOCTRINE.

THE doctrine that there is a fund the exact amount of which must be expended in the payment of wages, and hence that average wages may be obtained by dividing this sum by the total number of laborers, is usually credited to McCulloch. As a matter of fact, this doctrine found unqualified statement as early as the publication of "The Wealth of Nations." (Book I. Chap. VII.) It will therefore be in order to begin a review of this doctrine with Adam Smith's contribution to the subject.

I. THE EARLIER ADVOCATES OF THE THEORY.

116. Adam Smith writes: "The demand for those who live by wages, it is evident, cannot increase but in proportion to the increase of the funds which are destined for the payment of wages." Again, "The demand for those who live by wages, therefore, necessarily increases with the increase of the revenue and stock of every country, and cannot possibly increase without it. The increase in revenue and stock is the increase of national wealth. The demand for those

who live by wages, therefore, naturally increases with increase of national wealth, and cannot possibly increase without it." He also writes: "The diminution of the capital stock of society or of the funds destined for the maintenance of labor as it lowers the wages of labor, so it raises the profits of stock." (Book I. Chap. VIII.)*

In these "funds which are destined for the payment of wages," or the "funds destined for the maintenance of labor," we undoubtedly have that "Wages Fund Doctrine" which, as we shall see later on, has provoked so much just criticism.

117. James Mill writes: "Universally, then, we may affirm, other things remaining the same, that if the ratio which capital and population bear to one another remains the same, wages will remain the same; if the ratio which capital bears to population increases, wages will rise; if the ratio which population bears to capital increases, wages will fall." ("Political Economy," p. 44.)

118. Ricardo accepts this Doctrine, but carries the Argument a Step farther.—In the first place, Ricardo clearly recognizes that the doctrine applies to real and not to nominal wages. Speaking of a general rise of prices, and so of the price of corn as

*The recognition of this reciprocal relation between wages and profits is usually regarded as originating with Ricardo. But nowhere does the latter give more explicit statement to this proposition than is found in the above lines from Adam Smith.

a result of an influx of the precious metals, or of the abuse of banking privileges, he says, "It leaves undisturbed, too, the number of laborers as well as the demand for them; for there will be neither an increase nor a diminution of capital. The quantity of the necessaries to be allotted to the laborer depends on the comparative demand and supply of necessaries, with the comparative demand and supply of labor, money being only the medium in which the quantity is expressed; and as neither of these is altered, the real demand of the laborer is not altered."

Again, Ricardo follows the wages fund doctrine to its legitimate conclusion, and holds that wages are only indirectly affected by the efficiency or productivity of labor. In a letter to Malthus, written in 1815, he says, "If instead of four, ten measures of cloth could be produced by a day's labor, no rise would take place in wages, no greater portion of corn, cloth, or cotton would be given to the laborer, unless a portion of the increased produce were employed as capital, and then the rise in wages would be in proportion to the increased demand for labor, and not at all in proportion to the increase in quantity of commodities produced." It is against this necessary conclusion of the wages fund doctrine that much of the later and best criticism of this doctrine has been directed.*

* We have here availed ourselves of the excellent review of the literature of the subject in Taussig's "Wages and Capital."

In so brief a sketch we may safely ignore the writers who defended this doctrine in the interval between Ricardo and J. S. Mill; for, while it is true that McCulloch is frequently spoken of as the author of the doctrine, yet the preceding quotations from Smith, Ricardo, and the elder Mill will show how utterly unfounded is this claim.

II. THE LATER ADVOCATES AND CRITICS OF THE THEORY.

119. J. S. Mill's Statement of the Theory.—J. S. Mill writes: "Wages, then, depend mainly upon the demand and supply of labor; or, as it is often expressed, on the proportion between population and capital. By population is here meant the number only of the laboring class, or, rather, of those who work for hire; and by capital, only circulating capital, and not even the whole of that, but the part which is expended in the direct purchase of labor. . . .

"With these limitations of the terms, wages not only depend on the relative amount of capital and population, but cannot, under the rule of competition, be affected by anything else. Wages (meaning, of course, the general rate) cannot rise but by an increase of the aggregate funds employed in hiring laborers or a diminution in the number of competitors for hire; nor fall, except either by a diminution of the funds devoted to paying labor or by an increase in the number of laborers to be paid." (Book II. Chap. XI.)

It should be noted that in this last paragraph Mill

bases the wages fund doctrine upon the general law of supply and demand; wages "under the rule of competition" cannot be affected by anything but the relative amount of capital and population, the former being the demand for and the latter the supply of this commodity.

(*a*) MILL'S CONTENTION THAT TRADES UNIONS CANNOT INCREASE WAGES.—It will be necessary to quote one more passage from Mill if we are to understand the very interesting controversy that took place between this writer and W. T. Thornton. After expressing sympathy with labor organizations Mill continues: "They might doubtless succeed in diminishing the hours of labor and obtaining the same wages for less work, but if they aimed at obtaining actually higher wages than the rate fixed by demand and supply, the rate which distributed the whole circulating capital of the country among the entire working population, this could only be accomplished by keeping a part of their number permanently out of employment." * In other words, it follows as a necessary conclusion from the premises of the Wages Fund Doctrine that Trades Unions are powerless to improve the condition of the laborer by raising his wages. It was this necessary conclusion that provoked Thornton's able and incisive criticism.†

With this criticism and Mill's practical acceptance

* Book V. Chap. X. Sec. V.

† Wm. Thomas Thornton "On Labor."

of Thornton's conclusions we have now to deal. It is sometimes said that Mill, in the latter part of his life, had become so imbued with the ideas of the socialist writers that his defence of the old orthodox economics had been greatly weakened. This is supposed to explain his hasty abandonment of the Wages Fund Doctrine as a result of Thornton's attack. In the present review of this most interesting movement in economic theory we hope to show how utterly hopeless a case Mill had to defend, and how able a champion there was on the other side of the question.

120. **Longe's Criticism of Mill.**—This writer (Francis D. Longe, barrister) published in 1866 "A Refutation of the Wages Fund Doctrine" three years before Thornton published his book "On Labor, etc." This sudden interest in the Wages Fund Doctrine was undoubtedly due to that growing activity of the trades unions which resulted in the great commission of 1867. It was, of course, clearly seen that if the Wages Fund Doctrine was sound, then the attempts of the unions to raise wages was worse than useless. It was undoubtedly this necessary conclusion that provoked the vehement attacks upon the doctrine which appeared at this time.

Longe held that the Wages Fund Doctrine fails, first, because, as a matter of fact, there is no distinct fund which is definitely set apart for the payment of wages, and, secondly, because the doctrine rests upon a wrong notion of the part played by supply and de-

mand in the determination of price. But as our space is limited, and as these contentions find much clearer statement in Thornton's book, it will be well to restrict ourselves to a review of that writer's contribution.

121. Thornton's Theory of Price and Wages.— Thornton's attack was not, as is frequently stated, primarily directed against Mill's occasional lapse from real to nominal wages, for Thornton himself was not always clear upon this point. The thesis which Thornton sought to establish was that laborers, by combining, may exercise a monopoly influence and so raise the rate of wages. In his development of this thesis he goes at once to the root of the whole question and *denies Mill's fundamental contention that "the rate of wages or the price of any other commodity is necessarily fixed by demand and supply."*

While Thornton is not altogether happy in his use of terms, there can be no doubt about the soundness of his main argument. Stated very briefly and in modern terms, this argument is found to be practically the same as that developed in the fifth chapter of the present volume. The utility of a good to the consumer and producer, or the demand and supply, to use the older terms, only establish limits within which the price may vary. The point within these limits at which the price is actually fixed depends upon the relative monopoly strength of buyer and seller, and so is incapable of reduction under an exact law. In developing this thesis Thornton shows that

the relation between the supply and demand may vary without a corresponding variation in the price of the commodity.

Thornton's statement of the case is as follows: "We have in the first place to observe that there are two opposite extremes,—one above which the price of a commodity cannot rise, the other below which it cannot fall. The upper of these limits is marked by the utility, real or supposed, of the commodity to the consumer; the lower, its utility to the dealer." (Page 58.) That the price will be greater or less, according as the seller or the buyer is in the best position to take advantage of the other's necessities, is clearly indicated in the following passage: "Sometimes it is the buyer or employer who, although greatly in need of labor, yet needing it less than the laborer needs employment, can better afford to wait, and can thereby artificially (or artfully, if you prefer) diminish or, more properly speaking, conceal demand. Sometimes it is the laborer who can best afford to wait, and who, in like manner, has artifices at his command by which he can lessen supply, etc." Again Thornton writes: "The relations between supply and demand might vary without being accompanied or followed by variations in price, while, on the other hand, price might vary without any concomitant or antecedent variations of supply and demand." (Page 57.) The marginal concepts also find some possible recognition in passages like the following: "Competition does, indeed, always depend upon

the estimate of the probable supply and demand formed by those dealers who rate *lowest* the probable proportion of demand to supply." (Page 64.)

In the development of his thesis Thornton shows by concrete illustrations that his law of price is true for the market price of general commodities, and likewise for wages or the price of labor. "Speaking generally, we may no doubt say, with perfect accuracy, that the price of labor is determined by the same general cause as the price of any other salable commodity. In no case whatever is it immediately dependent upon supply and demand." (Page 66.)

In brief, then, Thornton held that in the case of labor, as of every other commodity, price is not fixed in an exact way by supply and demand, or, to use more modern terms, by its marginal utility to seller and buyer. These only establish limits within which the price may vary, the price being finally determined at some point within these limits by the relative monopoly strength of seller and buyer. It follows from this, and we here have the thesis that Thornton set out to establish, that laborers by combining or by increasing their monopoly strength may increase their wages. If this is true, then there can be no fixed wages fund the exact amount of which must be expended in wages.

"Nine-tenths of the confusion and obscurity," writes Thornton, "in which the doctrine of price has hitherto been involved has arisen from searching after the unsearchable, from seeking for some invari-

able rule for inevitable variations, *from straining after precision where to be precise is necessarily to be wrong. Supply and demand are commonly spoken of as if they together formed some nicely fitting, well-balanced, self-adjusting piece of machinery, whose component parts could not alter their mutual relations without evolving, as the product of every change, a price exactly corresponding with that particular change.* Price, and more especially the price of labor, is scarcely ever mentioned without provoking a reference to the 'inexorable,' the 'immutable,' the 'eternal' laws by which it is governed; to laws which, according to my friend Professor Fawcett, 'are as certain in their operation as those which control physical nature.' It is no small gain to have discovered that no such despotic laws do or can exist; that, inasmuch as the sole function of scientific law is to predict the invariable recurrence of the same effect from the same causes, and as there can be no invariability where—as in the case of price—one of the most efficient causes is that ever-changing chameleon, human character or disposition, *price cannot possibly be subjected to law.*" (Page 65.)

122. **The Importance of Thornton's Theory of Price not generally recognized.**—So far as I know, the great importance of Thornton's discussion of the general theory of price has never been fully recognized. Even so eminent an economist as F. W. Taussig, writing as late as 1896, has failed to see the fundamental point made by Thornton. Taussig

writes: "We need not follow the intricacies of his [Thornton's] reasoning about supposed cases of *horses at one price and another*, of corn and gloves, Dutch auctions, and so on. With the application of the principle of marginal utility this whole phase of economic theory has become simplified. Mill's equation of demand and supply is stated in better terms, and with fuller consideration of all the elements involved in the now familiar proposition that price depends on marginal utility. Mill himself, in admitting the justice of some of Thornton's criticisms, pointed out that one important condition had not been mentioned in the *Political Economy*, which yet must be present if the equation of demand and supply is to fix price at a definite point. *Quantity demanded must vary with price continuously.* The same condition, it is clear, must be present if the modern version of the law of demand and supply is to bring a determinate answer. If marginal utility is to fix price without a range of possible variation, each added increment of the article offered must have a less utility than the portion preceding it. These are now commonplaces; they make Thornton's discussion antiquated and leave Mill's significant only as showing that, on topics which he had stopped to think over with care, he reasoned with severe accuracy." (The italics are mine.) ("Wages and Capital, p. 251.)

When Taussig dismisses "the cases of horses at one price and another" with such scant courtesy, and

when he says that "this whole phase of economic theory" finds much simpler statement in terms of marginal utility, he seems to have missed the essential point in Thornton's contention. For if Thornton had been familiar with the modern doctrine of marginal utility he would have insisted that marginal utility does not determine price except in the rare case of normal value.

Again, are we told that Mill, in his reply to Thornton, pointed out the fact that the theory of price set forth in the "Political Economy" is only true under the assumption that "Quantity demanded must vary with price continuously." From this Taussig concludes that "on topics which he [Mill] had stopped to think over with care he reasoned with severe accuracy." Now, I would ask, is this entirely fair to Thornton? for this latter writer has repeatedly called attention to this assumption, as in the above italicized passages. Indeed, his whole argument against the then accepted theory of price was based upon the contention that this condition is not generally realized in the markets of the world. Mill believed that this assumption was generally realized in the price of commodities, for he held that "scarcity goods are rather conceivable than actually existing." Thornton, on the other hand, took the more modern view and recognized the general prevalence of scarcity goods, and is thus led to conclude that the quantity demanded does *not* vary with the price continuously.

And so while Mill thought that the old theory

might be pieced out by the discovery of some "supplementary law," Thornton held that "price cannot possibly be subjected to law," and this for the reason that in last resort general prices depend upon the relative monopoly strength of buyer and seller. In view of this it must, I think, be admitted that it is Thornton who reasoned with severe accuracy, and that his reasoning has made antiquated not only Mill's discussion, but much of the discussion of the Austrian economists as well.

It is more than probable that the present writer would likewise have missed the point raised by Thornton if he had not worked out this same thesis, in Part I. of the present volume, some years before his reading of Thornton "On Labor." Thornton, however, approaches the question inductively, while in my discussion the accent is thrown upon the deductive argument, for the contention that "demand varies with price continuously" is found to rest in last resort upon the assumption of absolutely free competition on the side of the consumers. An assumption that has no greater warrant than that which lies back of Ricardian economics, to wit: that competition is absolutely free on the side of the producers.

123. One Source of Confusion in Thornton's Discussion.—This writer clearly recognizes, as we have seen, that supply and demand, or marginal utility to buyer and marginal utility to seller, only establish limits within which the price may vary. He also rec-

ognizes that the final determination depends upon the relative monopoly strength of buyer and seller, for he has written: "Sometimes it is the buyer or employer who, although greatly in need of labor, yet needing it less than the laborer needs employment, can better afford to wait, and can thereby artificially (or artfully if you prefer) diminish or, more properly speaking, conceal demand. Sometimes it is the laborer who can best afford to wait, and who in like manner has artifices at his command by which he can lessen supply," etc. Moreover, Thornton does not regard this as peculiar to the wages of labor, but holds that it is true of the market prices of general commodities.

Elsewhere, however, Thornton tells us that supply and demand dot no "affect price, except indirectly, and by their influence on *competition*, which, and which alone, is the immediate arbiter of price." (Page 64.) Again, he writes, "Wherever competition is permitted to act without restriction, he will find that the price may vary exceedingly without the smallest variation in the relations of supply and demand; and he will also find that there cannot be the smallest variation in the price without a previous and corresponding variation in *competition*, which, therefore, he will, in the cases examined, be constrained to recognize as the price's determining cause." (Page 69.) This contention that competition is the ultimate determining cause of price certainly seems to conflict with the first contention, that price depends upon the

artificial, artful, or monopoly control of the supply of and demand for a commodity.

This confusion in his thought is brought out even more distinctly in a foot-note on page 69: "This, in speaking of tangible commodities, seems to me a more accurate as well as a simpler way of stating the case than to say that the competition of dealers makes price fall, and that competition of customers makes it rise. What the latter competition seems to me really to do is to show the dealers that a higher price than they previously supposed is attainable, and to induce them consequently to relax their own competition so as to obtain it."

Thornton here follows the earlier economists and apprehends very clearly and strongly the competition among producers or sellers, and that this results in a declining price. When, however, he turns to the phenomenon of advancing price his contention that competition is the final determinant of price compels him to recognize competition among buyers or consumers as the cause of this advance. But the inherited tendency to associate competition with falling prices asserted itself, and he concludes that competition among buyers does not directly affect prices, but only shows that a higher price may be obtained, and this induces the sellers "to relax their own competition so as to obtain it." Or he here contends that in the case of advancing prices it is not competition but the *relaxing of competition* that determines price. In other words, that it is the

artificial, artful, or monopoly control of the supply by the sellers that is here the ultimate determinant of price. The explanation of this difficulty is readily found. We usually think of monopoly as absolutely controlling the supply. As a matter of fact, neither competition nor monopoly is absolute on either side, hence the phenomena may be described either in degrees of competition or in degrees of monopoly, just as we might say either that we have so many degrees of heat or so many degrees of cold. We tend, however, to associate competition with the concept of free competition or with normal price, and to apply the term monopoly to every departure from normal conditions. It may, therefore, save some confusion if we abandon Thornton's contention that competition is the final determinant and say, as I have done, that marginal utility and marginal disutility only fix the limits within which the price may vary, and that the point at which the price is finally fixed depends upon the relative monopoly strength of buyer and seller.

124. There is no Fund set apart for the Payment of Wages.—In a foot-note on pages 84, 85, Thornton approaches the question in a less didactic way, and, as this is the part of his argument most frequently referred to, it may be well to reproduce it at some length. He writes:

"What makes mischievous fallacies doubly mischievous is their incorrigible propensity to propagate their species. Only allow them a little time to settle,

and they are sure to swarm like bees. Of course, so inveterate a fallacy as the popular theory of supply and demand could not fail to have a numerous offspring, which may accordingly be seen cropping up in a variety of shapes in every direction. Among the most unmistakable of its progeny is a certain imaginary 'wage fund;' on the proportion between the amount of which, and the quantity of labor in the country, the price of labor or rate of wages is sometimes declared to depend. On this subject an excellent friend of mine, and an excellent economist to boot, speaks as follows in a very interesting little volume which he has lately published: 'The circulating capital of a country is its wage fund. Hence, if we desire to calculate the average money wages received by each laborer, we have simply to divide the amount of capital by the number of the laboring population. It is, therefore, evident that the average money wages cannot be increased unless either the circulating capital is augmented or the number of the laboring population is diminished.' (Fawcett's 'Economic Position of the British Laborer,' p. 120.) It is due to Professor Fawcett's high and deserved reputation to explain that, in saying this, he is apparently repeating, without much reflection, what has often been said before by MacCulloch and others of equal eminence among his predecessors. What, however, does his and their language mean? Evidently nothing less than this, that there is a certain national fund, the whole

of which must necessarily be applied ('destined' was MacCulloch's favorite word) to the payment of wages. But, is there really any such fund? If there be, it can only be an aggregate of smaller funds of the same kind possessed by the several individuals composing the nation. But has any individual any such fund? Is there any specific portion of any individual's capital which the owner must necessarily expend upon labor? Of course, there is a certain amount which every effectual employer can afford to spend upon labor, as also there is in every instance a certain limit to that amount which cannot possibly be expended. But must the amount, so limited, which is thus applicable to the purchase of labor, be necessarily so applied? Does any farmer or manufacturer or contractor ever say to himself, 'I can afford to pay so much for labor; therefore, for the labor I hire, whatever the quantity be, I will pay so much'? Does he not rather say, 'So much labor I require, so much is the utmost I can afford to pay for it, but I will see for how much less than the utmost I can afford to pay I can get all the labor I require'? But if there thus be no wage fund which any single employer is bound to distribute among laborers, evidently there can be no aggregate fund which the whole body of employers is bound so to distribute; evidently, therefore, there can be no national wage fund, division of which by the whole number of laborers seeking employment will show the average rate of wages they will obtain."

125. Mill's Reply to Thornton.—Mill replied to Thornton in the *Fortnightly Review*, May, 1869. He there admitted that there are cases where supply and demand do not accurately determine price, and that there is, therefore, some supplementary law yet to be developed. He writes: "Whoever can teach us the supplementary law makes a valuable addition to the scientific theory of the subject." But in this very admission Mill betrays his utter failure to appreciate the point that Thornton had made,—namely, that the conditions fixing the price at some point within the limits established by supply and demand are so indeterminate as to be incapable of reduction under any exact law. (See Section 121 of present volume.)

After admitting that in a few exceptional cases of general commodities Thornton's contention holds good, Mill turns to the question of wages and inquires whether Thornton's contention holds good in this connection. Mill writes: "It will, of course, be said that these speculations are idle, for labor is not in that barely possible excepted case. Supply and demand do not entirely govern the price obtained for labor. The demand for labor consists of the whole circulating capital of the country, including what is paid in wages for unproductive labor. The supply is the whole laboring population. If the supply is in excess of what the capital can at present employ, wages must fall. If the laborers are all employed and there is surplus capital still unused, wages will

rise. This series of deduction is generally received as incontrovertible. They are found, I presume, in every systematic treatise on Political Economy, my own certainly included. I must plead guilty to having, along with the world in general, accepted the theory without the qualifications and limitations necessary to make it admissible.

"The theory rests on what may be called the doctrine of the wages fund. There is supposed to be, at any given instant, a sum of wealth which is unconditionally devoted to the payment of the wages of labor. This sum is not regarded as unalterable, for it is augmented by saving and increases with the progress of wealth; but it is reasoned upon as being at any given moment a predetermined amount. More than that amount it is assumed that the wages-receiving class cannot possibly divide among them; that amount, and no less, they cannot but obtain. So that, the sum to be divided being fixed, the wages of each depends solely upon the devisor,—the number of participants. In this doctrine it is by implication affirmed that the demand for labor not only increases with the cheapness, but increases in exact proportion to it; the same aggregate sum being paid for labor whatever its price may be." (Page 515.) Mill then asks, "But is there such a thing as a wages fund, in the sense here implied? Exists there any fixed amount which, and neither more nor less than which, is destined to be expended in wages?" (Page 516.) His answer to this question is in the negative.

"There is no law of nature making it inherently impossible for wages to rise to the point of absorbing not only the fund which he (employer) had intended to devote to carrying on his business, but the whole of what he allows for his private expenses, beyond the necessaries of life. The real limit to the rise is the practical consideration, how much would ruin him or drive him to abandon the business; not the inexorable limit of the wages fund." (Page 516.)

It is interesting to note that Mill here goes down before an argument which Thornton regarded as so unimportant that he committed it to a foot-note. The theory of price to which Thornton devoted much space, and which was his most important contribution to economic theory, Mill dismisses as true of a few barely possible cases. The reason for this failure to recognize the importance of Thornton's contention is found in the fact that Mill continued to think of scarcity goods as rather conceivable than actually existing.

126. Wages are affected by the Productivity of Labor.—Again, it might be urged that the wages fund doctrine leads us inevitably to the conclusion reached by Ricardo,—namely, that wages are only indirectly affected by the efficiency or productivity of labor. Now, since in the case of all other commodities the price tends to vary with the efficiency or utility of the commodity, a theory of wages which contravenes this experience is at least open to serious suspicion. Again, when we remember that capital

may be invested either in machines or in the wages of laborers, it becomes manifest that the amount severally devoted to these competing interests will depend on their relative efficiency; where wages are higher relatively to the efficiency of labor, there will be a corresponding increase in the capitalistic methods of production. In other words, more capital will be invested in machines and less in men. If, however, the efficiency of labor is increased, more capital will be determined to labor, and wages will rise.* Nor do we successfully avoid this criticism by confining our wages fund to the capital dedicated to the payment of labor, for this fund is, manifestly, indeterminate, since it, too, must vary with the relative efficiency of men and machines. The best review of this phase of the question will be found in "A Critique of Wage Theories," by Dr. Stuart Wood, which was published in the "Annals of the American Academy."

127. Cairnes's Attempt to rehabilitate the Doctrine.—Cairnes, who sought to rehabilitate the wages fund doctrine, added but little to this part of the discussion. He admitted Thornton's contention that within certain limits the laborers might by combination increase their wages. He, however, urged that

* In keeping with this, the high wages in the United States have compelled a more general use of machinery than prevails elsewhere; but the fact that capitalistic methods are more generally adopted in the United States may indicate that the difference in wages exceeds the difference between the efficiency of labor here and in Europe.

if their demands trenched upon the normal rate of profits the inducement to save would be lessened, capital would decrease, and, in the end, this would react upon the rate of wages. In other words, he held, and rightly, that there is some necessary relation between the supply of capital and the supply of labor, or that there is a sense in which it is true that wages can only increase with the increase of available capital. On page 271 it will be shown just what this necessary relation is, and we shall then learn that this relation is much too complicated to allow us to get the rate of market wages by a simple process of division. Again, it will be seen that it is only true for normal wages, and so is quite aside from the problem which the "wages fund doctrine" was supposed to solve. For, from Adam Smith to Taussig, this doctrine has been held to apply to market wages. The latter, for instance, writes: "The narrower question of 'market' wages, which is the essence of the wages fund doctrine, etc." (Note, p. 255, "Wages and Capital.")

128. The Element of Truth in the Wages Fund Doctrine.—The marvellous vitality of this doctrine, the persistence with which the ablest economists have clung to it, is due, in large part, to the soul of truth which it undoubtedly contains,—namely, that, under normal conditions, there is a necessary relation between the supply of capital and the earnings of labor. If profits fall below the normal rate, accumulation ceases and laborers are forced to work with less

efficient instruments. But it must be remembered that this is only true under normal conditions. The wages fund doctrine, therefore, has confounded confusion by attempting to impose a law upon market prices that can only be true for normal prices.

129. **The Source of the Confusion.**—It may be well, before leaving this part of the discussion, to inquire just how or why economists were betrayed into this error. In answer, it may fairly be said, that this "wages fund doctrine" was but part of the general attempt to reduce economic phenomena to more simple and manageable terms, which characterized the economics of the earlier part of this century. This was done by declaring that scarcity values are the exceptions and free competition the rule in the every-day industrial world. The simplicity and order that this introduced amid the previous chaos marked a great advance in economic theory, and gave to Ricardian economics its clearness and vitality. Nor should it be forgotten that, in the latter part of the last and the beginning of the present century, the trend of events seemed to be in the direction of free competition. But in the last half of the present century this tendency has been reversed, thus compelling us to recognize the fact that scarcity values are the rule rather than the exception.

CHAPTER II.

THE RESIDUAL CLAIMANT THEORY OF WAGES.

THIS theory may be briefly summed up as follows: Rent, interest, and profits are determined by fixed definite laws, while wages are a more or less indeterminate share of the social product. In other words, the receiver of wages is in much the same position as the residual claimant to an estate,—he must wait until all specific bequests have been paid, and then receives any balance that remains. This gives us a scheme of distribution that is much like that which was developed in Ricardian economics. There is, however, this important difference: in the one case the residual claimant is the receiver of wages, while in the Ricardian scheme the residual claimant is the receiver of Ricardian profits.

130. **Profits the Residual Share according to the Earlier Economists.**—In so far as the earlier economists troubled themselves about the problem of distribution, they held that the social product was divided into rent, wages, and profit,—the latter share being frequently confounded with interest. We have seen, in the preceding chapter, that Adam Smith and Ricardo both held that wages and profit vary inversely. This would seem to have been based on the contention that rent being fixed by a definite law, the

balance was divided between wages and profit; hence if one was increased the other must be diminished.

While this reciprocal relation between wages and profit is frequently insisted upon by Ricardo, yet here and there in his writings we find a very serious modification of this scheme of distribution. For, according to Malthus, normal wages are definitely fixed by the cost of producing labor, and according to the "Wages Fund Doctrine" market wages are definitely determined by dividing total capital by total number of laborers, while rent is more or less definitely determined by the Law of Rent. Both rent and wages being thus determined by definite laws, it follows that profit is the balance left after deducting the other two shares. In other words, he who secures this third share is in the position of a residual legatee. Here, in a very simple form, we have a scheme of distribution which, consciously or unconsciously, lies back of the whole Ricardian system of economics. Indeed, it was not until Cairnes attempted to rehabilitate the wages fund doctrine that we find a more or less conscious abandoning of this scheme of distribution.

131. Cairnes's Statement of the Residual Claimant Theory of Wages.—Cairnes, as we have seen, admitted Thornton's claim that wages might vary within certain limits. He, however, urged that if wages were so increased as to cut in on the normal rate of profits, saving would be discouraged, capital would decrease, men would be compelled to labor

with less efficient tools, and, hence, the wages of labor would of necessity decline. Now, while there was undoubtedly much truth in this contention, it was clearly a repudiation of that system of distribution which had been accepted without question for well-nigh half a century. For, since profits are here determined by a law of normal value, one might urge that the receiver of wages is then in the position of the residual claimant.

132. Walker's Residual Claimant Theory of Wages.—The late President Walker, who was the first clearly to enunciate the "Residual Claimant Theory of Wages," reached much the same conclusion as Cairnes, though by a somewhat different route. He first distinguishes between the function of the capitalist and the function of the entrepreneur. Having shown that entrepreneurs of superior skill receive a differential surplus, like owners of land of superior fertility, he gives to this differential surplus, when secured by the entrepreneur, the name profit. This, of course, gives us four shares in distribution,—rent of land; interest, or the normal surplus which Cairnes had in mind; profit, as defined by Walker; and wages. The first three of these shares being determined by definite laws, it seems to follow that the laborer is in the position of the residual claimant.

In the 1888 edition of his "Political Economy" Walker writes: "It has not been by accident, or whim, or from any notion respecting the comparative dignity of the several claimants to the product

of industry, that rent, interest, and profits have been discussed before wages."

"This order has been followed for a positive reason, which is that, in the theory of distribution here proposed, wages equal the product of industry *minus* the three parts already determined in their nature and amount. In this view the laboring class receive all they help to produce, subject to deduction on the three several accounts mentioned." (Page 248.)

"These three shares being cut off," the product of industry, the whole remaining body of wealth, daily or annually created, is the property of the laboring class; their wages, or the remuneration of their services." (Page 250.)

"I have spoken of the laborer as the residual claimant upon the products of industry. That view of wages being new, even the phrase in which I have embodied it has been excepted to. Since the first edition of this treatise was published certain writers have declared that there is no more reason for applying the term residual to wages than for applying it to any other share of the products of industry; that each share, in turn, comprises all which the other shares do not include." (Page 252.)

"The criticism of these writers is not just. It is competent to them to controvert the view of the origin and measure of business profits presented in the last chapter; and, in expressing their dissent therefrom, they will, of course, deny that wages constitute the residual share of the product. But no

one can properly make question that, if this view of business profits be accepted, as correctly setting forth, in the large way, the facts of industry, not only is what is manifestly meant by the phrases residual claimant, residual share, completely true, but also that those phrases themselves are perfectly accurate in the expression of that meaning." (Page 253.)

"Upon the theory of profits which has been expounded, the remuneration of labor, wages, is strictly the residual share of the product of industry; residual in this sense, that it is enhanced by every cause, whatever that may be, which increases the product of industry without giving to any one of the other three parties to production a claim to an increased remuneration, under the operation of the principle already stated; residual in the sense that, even if any one or all of the other parties to production become so engaged in any given increase of the product as to become entitled to an enhanced share in its distribution, their shares will remain subject to determination by positive reasons, while wages receives the benefit of all that is left after the other claimants are satisfied." (Page 253.)

133. **Criticism of Walker's Theory.**—In attempting any criticism of this theory of wages, it should be remembered that, like Thornton's effort, it was a protest against the "Wages Fund Doctrine." Thornton's protest, however, was principally directed against a conclusion to which that doctrine inevitably led,—namely, that all attempts of labor to improve its

condition by combining in Trades Unions, etc., are utterly futile. Thornton refuted this contention by showing that labor, like any other commodity, may have a scarcity or monopoly value. Now, it is interesting to note that one of the first criticisms of Walker's "Residual Claimant Theory" was to the effect that, like the "Wages Fund Doctrine," it leads to the conclusion that no combination of labor can help the condition of the laboring class. For, if the laborer is a residual claimant, then it must be true of him as of the residual legatee of an estate, that he is powerless to increase or decrease his share in the distribution. The other claimants having their shares fixed by definite laws, the laborer can only wait and accept what is left; an amount that may be either greater or less than was originally contemplated by the testator.

Walker replied to this by referring to his other writings, in which he had persistently advocated the importance of labor organizations. It was, however, open to his critics to urge that if he had followed his "Residual Claimant Theory" to its logical conclusion he would have seen how inconsistent it was with his previously declared position on the subject of trades unions, and that he must abandon one or the other of these positions.

Walker also referred, in rebuttal, to the original text, in which he developed the "Residual Claimant Theory of Wages," and called attention to the fact that he had there stated that the laborers would

receive their residual share "unless by their own neglect of their interest, or through inequitable laws, or social customs having the force of laws," etc. (page 251). This, of course, provokes the question, Does not this qualification practically negative the "Residual Claimant Theory"? If through law or custom the laborer is prevented from securing this residual share, has not his resemblance to the residual legatee of an estate, in any ordinary use of the term, practically disappeared? For, in this event, the laborer, like every other contestant, must exert whatever monopoly power he can control, if he wishes to avoid a loss. Again, Walker writes that the laborer may lose his advantage by "weak, spasmodic, or unintelligent competition with the employing class." (Page 259.) If this is true, does it not follow that the laborer's share depends, in last resort, not upon any residual claim, but upon his power to have and to hold?

Nor was Walker very successful in his reply to the further criticism that there is no more reason for regarding labor than for regarding capital as the residual claimant.* To this he replies, "This is perfectly true provided the laboring classes are placed at a disadvantage economically by excess of numbers over opportunities for employment, or by a painfully slow increase of capital, due either to the severity of natural conditions or to social violence or disorder.

* See John A. Hobson's criticism and Walker's reply in the Quarterly Journal of Economics, 1891.

In the latter case, it would be the capitalist, not the laborer, who would have the 'upper hand on the stick.' In fact, however, in all well-ordered communities, enjoying large natural resources, the accumulation of capital tends to outrun the increase of population, while the ability of capitalists (not of employers) to combine so as to prevent the rate of interest from falling under the pressure of a rapidly increasing supply is conspicuously less than the ability of laborers so to combine as to hold up the rate of wages. It was simply and solely on account of this economic advantage in such communities that the mastery of the situation was attributed to the laboring class." (Page 422, "Quarterly Journal of Economics, 1891.")

In answer to this it may again be urged, first, that when we declare that the laborer gets that which he is able to take and strong enough to defend, we have practically abandoned the concept of a residual claimant; secondly, on the very pages where Walker develops this Residual Claimant Theory of Wages he holds that in the case of an increase in the product due to the efforts of the laborer, "that increase goes to them by purely natural laws, provided only competition be full and free." In other words, his contention that the laborers are the residual claimants because they have the monopoly advantage of the capitalist is stultified by this assumption of free competition as a necessary condition of their receiving the product of their labor.

The conclusion to which we are here led is that parts of the earnings of land, capital, entrepreneur, and labor are determined in each case by definite laws. There is, however, another share that is incapable of reduction under any exact law, since its amount can only be determined by the relative monopoly strength of the several factors in production. There is, however, no residual claim involved in this determination, since it may be secured in part by each and every factor in production.

CHAPTER III.

THE PRODUCTIVITY THEORY OF WAGES.

THOUGH Walker failed to establish his "Residual Claimant Theory of Wages," yet his discussion of the problem was not without importance as a protest against one phase of the "Wages Fund Doctrine." We have seen that Ricardo followed this doctrine to its legitimate conclusion, and held that the efficiency or productivity of labor did not affect wages in any direct way. We have now to see that Walker's theory of wages involved a vigorous protest against this necessary consequence of the "Wages Fund Doctrine."

I. THE GENERAL PRODUCTIVITY THEORY OF WAGES.

134. Walker's Contention.—In his "Political Economy," 1888 edition, Walker writes as follows: "In the theory of distribution here proposed wages equal the product of industry minus the three parts already determined in their nature and amount. In this view the *laboring class receive all they help to produce*, subject to deduction on the three several accounts mentioned." (Page 248.) The three several accounts are, of course, rent, interest, and profit.

"These three shares being cut off, the product of industry, the whole remaining body of wealth, daily or annually created, is the property of the laboring

class: their wages, or the remuneration of their services. *So far as, by their energy in work, their economy in the use of materials, or their care in dealing with the finished product, the value of that product is increased, that increase goes to them by purely natural laws, provided only competition be full and free.*" (Page 250.)

That this writer was not entirely happy in his residual legatee illustration must, of course, be admitted. It is, however, unfortunate that his critics have so strongly accented this phase of his argument as to obscure their view of the important truth contained in the closing sentence of the above paragraph, namely,—that wages are in some measure dependent upon the productivity of labor. This is, indeed, so manifest that we cannot but wonder that it was not until the last quarter of the present century that a conscious attempt was made to develop a productivity theory of wages.

II. MARGINAL PRODUCTIVITY THEORY OF WAGES.

It will be noted that Walker's contention that the laborer receives his entire contribution to the social product, or that wages are determined by the productivity of labor, leaves open the very important question, What productivity of labor is it that determines the rate of wages? In other words, Walker here contents himself with a vague, indefinite concept of productivity, much as the advocates of the earlier utility theory of value contented themselves

with a vague, indefinite concept of utility. The discussion, however, was not long allowed to remain in this unsatisfactory state. With the development of the marginal utility theory of value economists quickly saw that the value of labor, like the value of all other commodities, is in some measure determined by its marginal utility or productivity.

135. Concrete and Abstract Concepts of Labor. —But before much progress could be made in the development of this thought it was necessary clearly to distinguish between two essentially different concepts of labor. In the development of the marginal productivity theory of interest we saw that there are two essentially different concepts of capital: first, as a sum of concrete commodities, tools, machines, etc., and, second, as an abstract mobile, homogeneous fund. The first to recognize the existence of similar concepts in the case of labor was Karl Marx, and in this he certainly made a most important constructive contribution to economic theory.

Marx writes: "By making the coat the equivalent of the linen we equate the labor embodied in the former to that in the latter. Now, it is true that the tailoring, which makes the coat, is *concrete labor* of a different sort from the weaving, which makes the linen. But the act of equating it to the weaving reduces the tailoring to that which is really equal in the two kinds of labor, to their common character of human labor. In this roundabout way, then, the fact is expressed, that weaving also, in so far as it weaves

value, has nothing to distinguish it from tailoring, and consequently is *abstract human labor*." (Page 12, Part I. Chap. I.) (The italics are mine.)

Or as the abstract mobile, homogeneous fund of capital finds concrete embodiment in loom and forge, so, too, the abstract mobile, homogeneous fund of labor finds concrete embodiment in weaver and blacksmith. I do not mean to say that Marx saw this parallelism between capital and labor, for his whole argument would refute any such claim. But that he did have a fairly clear notion of the two concepts of labor, first as an abstract fund, and second as a concrete embodiment of this fund, can hardly be denied. So, too, when he talks of "socially necessary labor" as the ultimate measure of value, he doubtless had in mind the earnings of the abstract, mobile, homogeneous fund of labor.

By far the clearest and ablest development of this phase of the theory of wages is found in an article by J. B. Clark on "The Law of Wages and Interest," which was published in the "Annals of the American Academy," and from which we have already quoted in our review of the productivity theory of interest. We shall here take the liberty of abstracting Clark's argument in regard to wages in a somewhat free manner.

As the entrepreneur pays a certain level average or, better still, minimum rate of interest for the money he has borrowed and invested in machines and tools, so, too, he pays a certain minimum rate of wages to

the laborers whom he employs. Special machines and men may earn much more than this so-called minimum or normal rate, but if they do, it is in their concrete and not in their abstract character. In other words, there is frequently a wide difference between the earnings of the concrete loom or weaver and the earnings of capital and labor conceived as abstract, mobile funds. The earnings of the concrete forms are usually determined under monopoly conditions, while the earnings of a mobile, homogeneous fund are necessarily determined under conditions of free competition or under the conditions of normal value. It follows from this that in any discussion of normal wages we have to deal, not with special concrete forms of labor, but with labor as a mobile, homogeneous fund, capable of taking any form the entrepreneur may desire.

136. **The Abstract Fund remains constant while Concrete Forms change.**—Here, too, the parallelism between labor and capital is complete. As machines wear out and are replaced from their previous earnings, so, too, particular laborers become superannuated and die; in the mean time they have reared others to take their places; in this way it becomes possible to transfer the abstract fund from one concrete form to another. If the wages of textile labor fall below those of iron-working, the younger men as they grow up will prefer the trades connected with the latter industry. It is in this way that the mobility of the abstract fund is maintained.

It is true that there are direct transfers of mature men from one industry to another, and with the continued subdivision of labor this becomes more and more frequent; but it should also be remembered that there is considerable mobility of the abstract fund due to the diverting of the younger men from the less remunerative to the more remunerative trades.

137. **The Rate of Wages determined by the Marginal Productivity of Labor.**—In our discussion of the productivity theory of interest we saw that if to a fixed fund of labor we add successive increments of capital, "the last dose of capital," to use Von Thünen's phrase, is compelled to find employment in the least profitable industry. As it is a mobile, homogeneous fund of capital that we are here considering, it is manifest, according to the law of marginal utility, that the value of the whole fund is fixed by the productivity of the last dose or increment that finds employment, or that interest is determined by the marginal productivity of the abstract fund of capital. That this is also true of the abstract fund of labor may readily be shown. We have only to assume that the supply of capital remains constant, while successive increments are added to the fund of labor, to see that this labor will be compelled to find employment in less and less productive industries, and that here, too, according to the law of marginal utility, the value of the whole will be determined by the product of the last increment. In other words,

normal wages are fixed by the marginal productivity of the abstract fund of labor.

Nor is Clark alone in this recognition of the marginal productivity of labor as the determinant of wages. In the "Proceedings of the American Economic Association," 1888, Dr. Stuart Wood published an article on "The Theory of Wages," in which this proposition is very clearly enunciated. He writes: "No labor will be sold unless it pays somebody to buy it. Rather than abandon its use the buyer would prefer to pay for each particular act of labor a sum in proportion to its real utility to himself. But it does not follow that he must always pay so much as this, nor does it follow that labor, as a whole, is paid the full price which employers could afford to give rather than dispense with its use entirely. The price of all labor is regulated, as are the prices of all commodities, by its final utility; by the utility, that is, of the portion which comes into use last; that portion, in short, whose services are least useful and least highly valued."

III. THE ELEMENT OF TRUTH IN THE WAGES FUND DOCTRINE.

138. Capital constant, Population increasing.— Under our last assumption, that the supply of capital remains constant while the supply of labor is increased, labor is forced into less and less productive industries, or, if you like, the laborer is forced to work with less efficient and possibly fewer tools. Population presses not upon land alone, but upon the

whole environment. In other words, we have that neo-Malthusianism to which Malthus has called attention in his later editions. The free fund of labor being forced into less and less productive industries, and wages being fixed by the marginal productivity of labor, it is manifest that in this pressure of population wages are lowered.

139. Population constant, Capital increasing.—Let us now reverse this assumption and inquire what will happen if population remains stationary while the free fund of capital increases. It is, of course, manifest that this will result in a complete reversion of the conditions we have just examined. Every laborer will have more efficient tools; in other words, he will receive more and more help from his environment, and the marginal productivity or the normal wages of labor will be increased.

140. A Certain Best Ratio of Capital and Labor.—We need not, however, conclude that the gain of one factor is necessarily a loss for the other factor. For from the above argument it is not a far cry to the conclusion that with the given technical development of any country or time there is a certain ratio between the supply of labor and capital that will yield the best results for both factors. We have seen that with capital constant and the supply of labor increasing, the additional labor yields a diminished return; again, with labor constant and the supply of capital increasing, labor has the advantage and capital must content itself with a dimin-

ished return. This, however, is only after the ratio of capital and labor has reached a certain point. Before reaching this point the additional labor or capital secures an increased return. Hence the point at which the transition is made from increasing to diminishing return is the ratio which yields the best return to both factors. It is only when we disturb this ratio that one factor's gain becomes another factor's loss. This may be well for the one who enjoys the advantage, but it is not so well for the others or for society as a whole. This evil tends, of course, to correct itself; for if those who control the fund of capital cannot secure a normal surplus, the tendency to save, and with it the increase of capital, will suffer a decline. This will continue until the balance is restored and capital again secures its normal return. So, too, labor will cease to increase in numbers or efficiency if it does not secure a similar normal surplus.

141. Application to the Wages Fund Doctrine.— It will now be manifest how intimate is the relation between the supply of capital and the supply of labor, and how an increase in capital results in an increase in wages by raising the marginal productivity of labor. This, then, is the soul of truth in the Wages Fund Doctrine. The relation between the two factors, however, is not so simple that we can obtain the rate of market wages by dividing the total capital by the total number of laborers. Again, it needs to be remembered that, just as up to a certain

point the rate of wages tends to increase with the supply of capital, so, too, up to a certain point the rate of interest tends to increase with the supply of labor. In conclusion, I would again call attention to the fact that we are here discussing not the earnings of loom or weaver, but the earnings of the mobile, homogeneous funds of capital and labor.

IV. OBJECTIONS TO THE MARGINAL PRODUCTIVITY THEORY.

It may be said that any attempt to formulate a productivity theory of wages is open to the same objections that were urged against the productivity theory of interest.

Even though we pass from the vague concept of general productivity to the very definite concept of marginal productivity, much still remains to be done; for, as this margin is conditioned upon the supply of labor, it follows that any complete analysis must tell us something about the limitation of this supply.

142. What determines the Margin of Production? What limits the Supply of Labor?—In the case of interest, we saw that this limitation was effected by the disutility or abstinence endured by the marginal saver or capitalist. The question, therefore, presents itself, and is certainly an interesting one, How is this limitation of supply effected in the case of labor? Is there here any interference with consumption that corresponds with the abstinence of the marginal saver? In Chapter V. we hope to show

that there is some such interference; but before doing so it will be necessary to disabuse the mind of one of the inherited traditions of economic theory. The impression made by the first edition of Malthus's "Essay on Population" was so strong that we continue, more or less unconsciously, to think of wages as containing only a bare subsistence, or that labor does not, like capital, secure a surplus. If, however, it can be shown that normal wages may contain a surplus, it would suggest the possibility of constructing an "exchange theory of wages" identical in many respects with Böhm-Bawerk's "Exchange Theory of Interest." As the belief that wages can contain only a bare existence is largely due to the first edition of the "Essay on Population," we cannot do better than follow Malthus in his later editions, in which he repudiates this contention, and holds that all progress is conditioned upon a surplus in wages.

CHAPTER IV.

THE MALTHUSIAN THEORY OF WAGES.

It hardly need be urged that in his "Essay on Population" Malthus set forth a cost theory of wages. In the first edition his general contention was that the sexual instincts or desires are so strong that any increase in the food-supply of the lowest classes can only result in a corresponding increase in the number of their children; and that this increase would be continued until population again pressed upon subsistence. In other words, he concludes that, in the long run, the laborer cannot hope to secure more than a bare existence. This is equivalent to saying that the wages of labor cannot permanently exceed the cost of producing labor.

I. THE EARLIER MALTHUSIAN THEORY OF WAGES.

143. The Pressure of Population upon Subsistence.—In the development of his thesis, Malthus held that population tends to increase in a geometrical, and food in an arithmetical, progression, basing these conclusions very largely upon American experience, where population had doubled every twenty-five years. This, of course, would soon result in a wide divergence between population and the supply of food. Without insisting upon the geometrical and arithmetical concepts, we may yet admit that popula-

tion does *tend* to outrun the food-supply, or that population does *tend* to press upon subsistence.

144. The Function of Misery and Vice.—This brings us to the question, What influences are at work to restrain this tendency? Malthus, in his first edition, replies: "These checks on population are, among mankind, misery and vice. . . . No possible *form* of society could prevent the almost constant action of misery upon a great part of mankind if in a state of inequality, and upon all if all are equal." Again, he writes: "That the superior power of population cannot be checked without producing misery or vice, the ample portion of these two bitter ingredients in the cup of human life, and the continuance of the physical causes that seem to have produced them, bear too convincing a testimony."

145. The Standard of Life.—It should be noted, however, that in at least one passage of the first edition we find some recognition of a different condition of society. Malthus writes: "In the different states of Europe there must be some variations in the proportion between the number of inhabitants and the quantity of food consumed, arising from the different *habits of living* that prevail in each state. The laborers of the south of England are so accustomed to eat fine wheaten bread that they will suffer themselves to be half starved before they will submit to live like the Scotch peasants. They might, perhaps, in time, by the constant operation of the hard law of necessity, be reduced to live even like the lower

Chinese; and the country would then with the same quantity of food support a greater population. But to effect this must always be most difficult, and every friend of humanity will hope, an abortive attempt." (Page 132, first edition.)

Malthus, however, does not dwell long on this more hopeful view of society, for, on page 218, he writes: "The principal argument of this essay tends to place in a strong point of view the improbability that the lower classes of the people in any country should ever be sufficiently free from want and labor to attain any high degree of intellectual improvement." Again, on page 346, he writes: "It is undoubtedly a most disheartening reflection that the great obstacle in the way of any extraordinary improvement in society is of a nature that we can never hope to overcome."

146. The Pressure not Remote but Immediate.— To Malthus's mind, this pressure of population upon subsistence is not a remote contingency, but an ever-present reality. In this connection he writes: "An event at such a distance might fairly be left to Providence, but the truth is, that if the view of the argument given in this essay be just, the difficulty, so far from being remote, would be imminent and immediate. At every period during the progress of civilization, from the present moment to the time when the earth had become like a garden, the distress for want of food would be constantly pressing upon all mankind if they were equal. Though the produce

of the earth might be increasing every year, population would be increasing much faster, and the redundancy must necessarily be repressed by the periodical or constant return of misery and vice." (Page 144, first edition.) Malthus also urges that at any given time, say the present, population is not increasing as fast it might if nature was more bountiful. Hence the pressure of population upon subsistence is everywhere an ever-present reality. So pessimistic a view of the future of the laboring classes, and, indeed, of society as a whole, could not but provoke much violent criticism; and as a result of this criticism we find that as early as the second edition Malthus was forced to modify his earlier statement and to recognize that moral restraint also plays a part in checking the too rapid growth of population. Before leaving the first edition it may be well clearly to understand the conditions under which it was written.

147. The Issue between Malthus and Godwin.— The first edition of Malthus's "Essay on Population" appeared in 1798, and was in answer to an essay on "Avarice and Profusion," by William Godwin. The issue between these two writers is clearly stated in the latter part of the first edition of Malthus's "Essay." He there writes: "The great bent of Mr. Godwin's work on political justice, if I understand it rightly, is to show that the greater part of the vices and weaknesses of man proceed from the injustice of their political and social institutions, and that if

these were removed and the understandings of men more enlightened, there would be little or no temptation in the world to evil. It has been clearly proved, however (at least as I think), that this is an entirely false conception, and that, independent of any political or social institutions whatever, the greater part of mankind, from the fixed and unalterable laws of nature, must ever be subject to the evil temptations arising from want." *

Godwin, of course, reflected the movement in thought which in France had culminated in the Revolution. He held that the ills of life might be removed by changes in the social institutions of the time; that it was these alone that interfered with the ultimate perfectibility of mankind. Malthus repudiated this doctrine of the perfectibility of man, and held that there are subjective as well as objective difficulties to be encountered; that the evil in the world, its pain and misery, are due not merely to the failure of social institutions, but, far more, to the strength of certain impulses or passions inherent in the very nature of man. Had Malthus confined himself to defending this thesis no confusion would have arisen, but, as a matter of fact, he practically held that these subjective causes are the only ones that are operative, and so was led to conclude that no improvement in the condition of the lower classes is possible.

* P. 267, first edition, "Essay on Population."

II. THE LATER MALTHUSIAN THEORY OF WAGES AND THE CONDITIONS OF PROGRESS.

In the third edition of the "Essay on Population" we find a tentative abandonment of that concept of society in which wages cannot, for any long time, exceed the bare cost of existence, or in which a large part of mankind is doomed to a misery whose only mitigation is to be found in vice.

148. Virtue and Intelligence as Checks to Population.—In this third edition Malthus writes: "The evils arising from the principles of population are exactly of the same nature as the generality of other evils which excite fewer complaints; they are increased by human ignorance and indolence and diminished by human knowledge and virtue." (Book IV. Chap. III.)

Again he writes: "From a view of the state of society in former periods compared with the present, I should certainly say that the evils resulting from the principle of population have rather diminished than increased, even under the disadvantages of an almost total ignorance of their real cause. And if we can indulge the hope that this ignorance will be gradually dissipated, it does not seem unreasonable to expect that they will be still further diminished. . . . On the whole, therefore, though our future prospects respecting the evils arising from the principle of population may not be so bright as we could wish, yet they are far from being entirely disheartening, and by no means preclude that gradual and progres-

sive improvement in human society which, before the late wild speculations on the subject, was the subject of rational expectation." (Third edition, Book IV. Chap. I.)

149. Increase of the Food Supply an Essential Condition of Progress.—This more hopeful view of society led Malthus to inquire in his later editions as to the conditions of social progress, and, as a result of this inquiry, he concluded that a surplus in the supply of food is the primary and essential condition of this progress. This discussion first appeared in a volume which was published as an addition to the fourth edition, but its best statement is found in the seventh edition in a chapter devoted to "General Observations." He writes: "That an increase of population, when it follows in its natural order, is both a great positive good in itself and absolutely necessary to a further increase in the annual produce of the land and labor of any country I should be the last to deny. The only question is, What is the order of its progress? In this point Sir James Stewart, who has in general explained this subject so well, appears to me to have fallen into error. He determines that multiplication is the efficient cause of agriculture, and not agriculture of multiplication. But though it may be allowed that the increase of people beyond what could easily subsist on the natural fruits of the earth first prompted man to till the ground, and that the view of maintaining a family, or of obtaining some valuable con-

sideration in exchange for the products of agriculture, still operates as the principal stimulus to cultivation, *yet it is clear that these products, in their actual state, must be beyond the lowest wants of the existing population before any permanent increase can possibly be supported.*" (Page 382.) "*And in the same manner, with a view to any essential improvement in the condition of the laborer, which is to give him a greater command over the means of comfortable subsistence, it is absolutely necessary that, setting out from the lowest point, the increase of food must precede and be greater than the increase of population.*" (Page 383, seventh edition.)

150. Manufactures and an Advancing Standard of Life.—Despite this insistence upon an increase of the food supply as the primary condition of progress, Malthus sees quite clearly that so long as the bulk of the wages of the laboring classes is expended for food there is little hope for any permanent improvement in their condition. In a foot-note on page 130 of the fourth edition we find some hint of the process by which, as Malthus believes, this improvement will be effected. He there writes: "The condition of the laboring poor, supposing their habits to remain the same, cannot be very essentially improved but by giving them a greater command over the means of subsistence. But an advantage of this kind must from its nature be temporary, and is therefore really of less value to them than a permanent change in their habits. But manufactures by inspiring a taste

for comforts tend to promote a change in their habits, and in this way perhaps counterbalance all their disadvantages."*

Malthus here continues to hold, as in the first edition, that a "greater command over the means of subsistence or of *food* will eventually stimulate the growth of population, and so only helps the laborer temporarily." He then finds that their only hope is in an advancing standard of life or in an increased taste for the comforts of life, and that this is fostered by the growth of manufactures. His agrarian instincts led him, in his earlier editions, to deprecate the rapid growth of the towns, with their bad air and general overcrowding. He, indeed, saw in these towns the great menace to civilization. Hence, in the above passage, in which he urges that the growth of manufactures is an essential condition of progress, we find important evidence of the change that had gradually taken place in his views of society.

151. **Progress depends on the Supply of Capital as well as on the Supply of Land.**—Malthus, in his seventh edition (page 374), makes a further advance by showing how manufactures may effect an advance in the standard of life despite an increasing pressure upon the food supply. He writes: "In the natural progress of cultivation and wealth the

* The best modern statement of this contention is given by F. H. Giddings in "The Modern Distributive Process," page 54.

production of an additional quantity of corn will require more labor, while, at the same time, from the accumulation and better distribution of capital, the continual improvements made in machinery, and facilities opened to foreign commerce, manufactures and foreign commodities will be produced or purchased with less labor, and consequently a given quantity of corn will command a much greater quantity of manufactures and foreign commodities than while the country was poor. Although, therefore, the laborer may earn less corn than before, the superior value which every portion which he does not consume in kind will have in the purchase of conveniences may more than counterbalance this diminution. He will not, indeed, have the same power of maintaining a large family, but with a small family he may be better lodged and clothed, and better able to command the decencies and comforts of life."

It hardly need be urged that Malthus here has in mind a progressing society. This, of course, is in sharp contrast with the concept of a stationary or retrograding society, which lies back of all the reasoning of the first edition of his "Essay." And while he holds that the bounty of nature is the initial cause of all progress, yet he recognizes that it is not land alone, but the condition of the whole environment, that determines the progress of mankind to a better and fuller life.

The bounty of the environment gives rise to new

desires. These continue to be gratified as luxuries till by and by they become necessities; the standard of life has advanced and population again presses upon the environment. From this it follows that if further progress is to be made, the environment must again yield a surplus above this standard of life. Again, new desires arise, are gratified, and become fixed, the standard is again advanced, and another step in social progress is effected. There is still a pressure between population and environment, but it is no longer the environment pressing down, but the individual pressing up. There is still a struggle for existence, but it is for a higher and nobler existence. There is still a survival of the fittest, but it is not a survival of those fitted to endure a more and more impoverished environment, but a survival of those fitted to enjoy an ever-improving environment. It is no longer misery and vice, but the bounty of the whole environment and a growth in moral power that gives rise to an ever-advancing standard of life.*

* Darwin makes generous acknowledgment for the suggestions which he found in the "Essay on Population." But while his views accord with those contained in the first edition of the "Essay," they are at variance with those expressed in the later editions, notably the seventh. In that edition Malthus seems to suggest a Lamarckian rather than a Darwinian explanation of the phenomenon of progress. For he finds that all progress is affected through changes in the tastes and desires of mankind or through the volition of the organism.

Darwin, on the contrary, holds that like produces like with a tendency to vary, and that those species survive whose varia-

152. Malthus's Changed View of Society.—In how far Malthus's change of attitude was due to the im-

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tions *happen* to be in harmony with the changed environment. All is here left to the chapter of accidents, the volition of the individual counting for naught. So long as we confine ourselves to a study of the lower forms of life there is much to support this contention, for it is undoubtedly true that the environment here dominates the situation, but as we pass to the higher organic and super-organic phenomena the self-determining power of the individual asserts itself with ever-increasing power. Indeed, it might be said that the evolution of all organic forms is but an escape from the domination of the environment or a growth in self-determining power. This is clearly recognized by men of Darwin's school when they study these higher phenomena. Mr. Spencer, for instance, writes in regard to the evolution of conduct as follows: "We saw that conduct is distinguished from the totality of actions by excluding purposeless actions, but during evolution this distinction arises by degrees. In the very lowest creatures most of the movements from moment to moment made have not more recognizable aims than the struggles of an epileptic. . . . Their conduct is constituted of actions so little adjusted to ends that life continues only so long as the *accidents* of the environment are favorable. A higher form, as a rotifer, by better adjusting its own actions becomes less dependent upon the actions going on around it, and so preserves itself for a longer period." ("Data of Ethics," p. 11.)

In other words, though it be true that in the evolution of lower forms "nature is red in tooth and claw," yet this gives us no warrant for assuming that the same conditions must prevail in the evolution of the higher forms. Or, to again return to economic terms, it may be said that in the future social progress will depend less upon the direct pains of labor and more upon the disutility of abstinence.

provement in the condition of the masses in France subsequent to the Revolution it is, of course, impossible to say. But we do know that in his later editions he refers to this improvement upon more than one occasion. (See pages 189 and 320 of the seventh edition.)

In any event, there can be no question about his complete change of attitude towards the whole social problem. He no longer has in mind that stationary condition of society in which the laborer cannot hope to secure more than a bare existence. Instead, he contemplates a hopeful progressing society in which the laborer secures a surplus not only above a bare existence but above an ever-advancing standard of life. It must be borne in mind, however, that it is still a cost theory of wages that Malthus has in mind. In his first edition we have a theory of normal wages in a stationary society, while in his later editions he seeks to establish a theory of normal wages in a progressing society. This is a point on which we shall have more to say in the next chapter.

153. **The Unfair Treatment of Malthus.**—In conclusion, it may be noted that some economists continue to this day to direct their criticism against the teachings of the first edition of the "Essay on Population." For them the "Essay" has never gotten beyond the first, or at most the second, edition. Malthusianism continues to be defined as that pressure of population upon subsistence which is only relieved by the direful remedies of misery or vice. Even

when notice is taken of the fact that in his second edition Malthus recognized that moral restraint played an important part, this fact is only employed to refute the argument of the first edition. It is certainly time that some protest was entered against this essentially unfair treatment of one of the ablest of English-speaking economists. In common fairness it should be remembered that Malthus entirely abandoned this contention as well as the concept of society lying back of it. In other words, he no longer has in mind that concept of society in which the best that can be hoped for is that the conditions of life will not become worse. Instead, he sees a hopeful progressing society in which the passing years will bring an improvement in the condition of even the lowest classes.

CHAPTER V.

THE NORMAL VALUE THEORY OF WAGES.

I. THE GAIN AND ABSTINENCE OF LABOR.

HAVING followed Malthus in his escape from the pessimistic view of society which characterized the first edition of his "Essay," we are now in a position to recognize the fact that normal wages may contain a surplus above the mere cost of subsistence. This nowhere finds clearer statement than from the pen of F. H. Giddings in "The Modern Distributive Process." On page 54 he writes: "Nature makes generous advances to her children, but inexorably enforces payment. A given amount of food contains more energy, usually to be set free through its consumption, than was expended in obtaining it. Consequently, the value of work is usually a little more than the value of the antecedent work from which it was evolved. To these advances, persistently utilized,—advances converted into abilities, abilities, in turn, put forth in works,—the progress of mankind from savagery to civilization has been due." In other words, social progress is dependent upon the existence of a surplus in normal wages in excess of the amount necessary to maintain the existing standard of life. It is to this surplus that I would restrict the term *gain* of labor, and the contention of the present chapter will be that this gain of labor is

in all respects similar to that surplus return from capital to which the name interest has been given. It will be further urged that in the case of both of these surpluses we are dealing with a mobile, homogeneous fund, and so with normal value; that both are equated to some disutility, abstinence, or interference with consumption, and that in both of them there is an exchange of present for future goods. From this it follows that a theory of wages may be constructed which is practically identical with the "Normal Value Theory of Interest."

Much of the work necessary for the construction of such a theory has already been done by other economists. A review of their work will therefore be in order. In the review of the productivity theory of wages it was seen that labor like capital may be conceived either in its concrete forms of weaver and spinner or as a mobile, homogeneous fund, and that just as the interest on capital is the earning of the mobile fund of capital, so, too, the gain of labor is the earning of a similar mobile fund of labor.

154. Clark's Failure to recognize the Abstinence of Labor.—We have seen that the first to set forth in any complete way the important distinction between the concrete forms and the abstract mobile funds of capital and labor was J. B. Clark. Unfortunately, however, Clark did not follow the similarity between capital and labor to its legitimate conclusion, for he failed to see that there is a sacrifice of absti-

nence on the part of the laborer as well as on the part of the capitalist. In this connection Clark writes: "Labor is not the only sacrifice incurred in the creating of wealth. Abstinence entails a sacrifice and it increases the fruits of industry." *

It is here manifest that to this writer's mind the sacrifice of labor and the sacrifice of abstinence are two essentially different forms of sacrifice. In other words, he is here still in bondage to the older Malthusian notion that wages yield a bare subsistence. Yet, as has been shown in the preceding chapter, the moment we pass to the concept of a progressing society we see that normal wages must include a surplus. If the similarity which Clark has sought to establish between labor and capital has any substantial basis in fact, it should lead us to suspect the existence of some sort of abstinence on the part of the laborer, to be equated to this surplus in his wages; just as the abstinence on the part of the capitalist is equated to his surplus or interest. The failure of economists to recognize the existence of an interference with consumption in the experience of the laborer is readily explained. The earlier economists were interested in the problem of increasing the total wealth of a people or nation rather than in the problem of distribution. Modern economists, it is true, have taken more interest in the

* "Distribution as determined by a Law of Rent," Quarterly Journal of Economics, 1891.

latter problem, but they have largely confined themselves to an attempt to determine the shares secured by men as producers, ignoring for the most part their interest as consumers.

155. Patten on the Abstinence of Labor.—The first to abandon this traditional attitude and seriously to inquire as to the effect of consumption upon the distribution of wealth was S. N. Patten, who, in his "Theory of Dynamic Economics," writes as follows: "Every increase of productive power lengthens the time during which a man can work and have a surplus; but with every increase in the quantity produced more time is needed to consume it. The time needed to consume goods cuts in on the time which might be used to produce them, preventing the day's work from being prolonged until the effort of production equals the pleasure of consumption.

"Let us assume that a man occupies eight hours in sleep. Sixteen hours are thus left for work and leisure, or for production and consumption. If the man works after supplying the necessities of life, the return must be high enough to pay for the pain of production and the pleasure in consumption which he loses by spending his time in work." (Page 57.)

"When the productive power of society has increased beyond a certain point, the efficiency of the workman becomes so great that the time needed to consume what he has produced cuts into the time needed for production; he ceases to work before the pain of the last increment of production equals the utility of

the last increment of consumption. There is for the efficient workman a surplus at the margin of production equal to the pleasure that could be obtained in using their time in unproductive consumption." (Page 71.) "The sacrifice of the capitalist, therefore, is of the same nature as the sacrifice of the laborer when the latter gets a surplus above the cost of his labor." (Page 60.)

In this recognition of an abstinence on the part of the laborer identical in all respects with the abstinence on the part of the capitalist we have one of the most important contributions that has yet been made to the theory of normal wages.

156. Clark's Restatement of Patten's Contention.—Clark, in a review of "The Theory of Dynamic Economics," generously recognizes the great importance of Patten's contribution, and holds that it is an epoch-making book. He then restates the case in regard to the abstinence of labor in his own happy way. "It may well be that the last hour of labor in a day secures to the worker something that, in itself alone, is worth to him more than it costs in the way of mere fatigue; but if the gaining of it entails the imperfect utilization of other things already in possession, then the acquisition of it may be unprofitable. It will afford no surplus.*

"This fact, stated in another way, reveals a principle to which increasing interest and importance

* Annals of American Academy, July, 1892, p. 40.

attaches as the industrial process perfects itself. The sacrifice involved in labor itself is coming to be largely abstinence. Confinement rather than fatigue is the cause of it, and this confinement burdens the man by that withdrawing of utility from things already in his possession, to which attention has just been called. To the man who is confined for most of his waking time nothing is really worth what it should be, and some things are worth very little. He cannot utilize them. Though he may have them in his house he is kept from enjoying them. The man who works twelve hours a day is the typical abstainer of our modern economy. The saddest feature of his abstinence is that it is practised on things that he actually possesses. He abstains from the full use of his house, his garden, and his furnishings and decorations. He foregoes much of the enjoyment of his books and papers, and even of the comelier part of his wardrobe. He has little time for wearing good clothes, for sitting on porches in summer, or before fireplaces in winter. He lacks leisure for reading, etc.

"What is worse, this lack of time takes the essential utility out of the free gifts of nature. It puts a blight on air and sunlight. It spoils, for this particular man, the trees, the streams, the hills, etc. 'We want to see the sunshine,' the worker is made to say in a somewhat familiar rhyme that expresses the eight-hour movement. It is the increase of utility that, for the men engaged in this struggle, two

extra hours of leisure would infuse into their entire environment that is the real object to be secured. This man wants to make the sun worth something." *

II. A NORMAL VALUE OR AN EXCHANGE THEORY OF WAGES.

With the data in hand we might readily construct an abstinence theory of wages that would be identical in all respects with the abstinence theory of interest. This, however, would give us, in the one case as in the other, but a partial solution for the problem. We are here dealing with a mobile, homogeneous fund, or with normal value; hence disutility and utility, or abstinence and productivity, must be equated. The marginal saver will not endure the disutility of abstinence unless he receives a corresponding surplus in his future product. It follows from this that any satisfactory solution of the wages problem must take account of productivity as well as of abstinence. While special laborers may receive more or less than normal wages, all labor that is free to move must receive at least normal wages. How much this will be is determined by the product of such free labor in the least productive branch of the whole field of industry; in other words, by the marginal productivity of labor. This raises the question, How is this margin or the supply of labor determined? The answer is as follows: The increase in the amount or efficiency of labor depends, in the first instance, on the realization

* Annals of American Academy, July, 1892, p. 41.

of a surplus in the product of labor above the cost of maintaining the present supply of labor at the existing standard of life. But in order to secure this surplus the hours of labor are prolonged beyond the point which would be sufficient to maintain existing conditions. This extension of the hours of labor involves a postponement of present enjoyment or an increasing abstinence on the part of the marginal laborer. It is this abstinence, therefore, which operates in restraint of the extension of the hours of labor, and so of the realization of that surplus in wages which is the necessary condition of an increase in the amount or efficiency of labor. In brief, then, the supply of labor, and so the margin of production, is determined by the disutility or abstinence endured by the marginal man who postpones his consumption in order that he may continue his labor.

It might further be urged, in support of the Normal Value Theory of Wages, that it is capable of statement in much the same terms as Böhm-Bawerk's Exchange Theory of Interest. We have already seen that we are here dealing with normal value, or with those conditions in which marginal utility and marginal disutility coincide. It only remains for us to show that in the gain of labor, as in the interest on capital, the increase in value is a function of time, and that somewhere along the line the laborer exchanges present for future goods.

157. The Time Utilities of Labor.—In an earlier

chapter we learned that capital has to do with utilities of time. That is to say, interest arises wherever time is necessary to mature the value of any commodity. It matters not whether this time is necessitated by the course of the season, as in agriculture; by that gain of power with a sacrifice of time which is incident to all machine production; by the seasoning of lumber, the curing of skins, the aging of wine, or the returning heat of summer which arouses the demand for and so increases the value of the ice cut months before,—all involve an increase of value as a function of time. And so we are led to conclude that wherever time necessarily intervenes between the first investment and the realization of the product in its fully matured value interest will arise. Eliminate time as a condition of the increase in value, or assume that the increase is an instantaneous process, and the surplus which we know as interest fails to appear.

But while it has been generally recognized that natural forces other than labor need time in which to realize or manifest themselves, we have unconsciously continued to think of labor force as though it was exerted instantaneously or as not requiring an appreciable interval of time in which to manifest itself. We say that this has been a more or less unconscious assumption, for the moment we give the matter any consideration we recognize that labor force, like all other natural forces, is subject to time limitations. From this it follows that the time necessary for the

exercise of the laborer's power may cut in on the time necessary for consumption, and so result in an abstinence on the part of the laborer.

158. The Exchange by the Laborer of Present for Future Goods.—If there is any abstinence or postponement of enjoyment on the part of the laborer there must in some way be an exchange of present for future goods. We are here met by the difficulty that in the payment of wages it is the capitalist and not the laborer who surrenders his claim on present or consumption goods, receiving in exchange unfinished products or future goods. This, of course, would serve as an explanation of interest, but if we are to account for the gain of wages, we must show that in some way the laborer surrenders his claim on present goods, receiving in exchange some form of unfinished or future goods. This, however, is not so difficult a matter as at first might appear. For the payment of wages by the capitalist is, after all, the second step in the transaction. The first step is that in which the laborer postpones the enjoyment of the free and other present goods under his control that he may continue his hours of labor. For this he receives in exchange the unfinished products of his labor or future goods. Later on he exchanges these unfinished products for present goods in the form of wages.

159. Confusion in Patten's Use of the Terms Cost and Surplus.—This brings us to a source of confusion which was developed in Patten's discussion of the

subject, and which it may be well to dispose of at this point.

Patten writes: "The sacrifice of the capitalist, therefore, is of the same nature as the sacrifice of the laborer, when the latter gets a surplus above the cost of his labor. The laborer gets this surplus because he abstains from some action which would have given him the same surplus. Like the capitalist, he is paid in this case for a negative act and not for a positive cost. Viewed from the position of society, neither of these acts is a cost, as they do not increase the positive pain which the members of the society must undergo. Viewed from the position of the buyer of goods, both are costs, because he must give a larger quantity of goods to get the articles they produce. Abstinence of either kind is a negative cost which affects the value of goods in distribution, but neither is a positive cost increasing the pains of production. To delay a pleasure or to change from one occupation to another is not the same thing as to undergo a pain, though they have the same effect on the value of the goods to consumers. Aggregate costs, therefore, are composed of two elements,—the positive cost of production and the negative cost of abstaining from the surplus which might be obtained by actions in less complete conformity to the interests of society. When it is said that marginal values equal the cost of production, a surplus in the form of interest and wages is added to the real cost." (Page 60.)

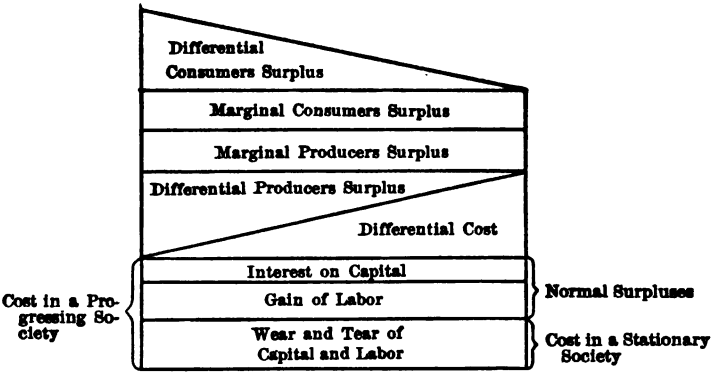
Now, not only are the terms positive cost and

negative cost far from happy, but the contention that one is a real cost and the other a surplus is distinctly misleading. And so we find that Clark, in his review of "The Theory of Dynamic Economics," takes exception to Patten's use of the terms cost and surplus. This discussion was continued through several numbers of the *Annals of the American Academy* without reaching any very definite result. To the present writer it has seemed that the source of the confusion lies in the tendency to confound the two essentially different concepts of society. In a stationary society cost is the actual wear and tear of the tissue of capital and labor involved in production. In a progressing society cost equals the above wear and tear of tissue plus the disutility or abstinence incurred in securing that surplus which increases the supply of capital and labor. Both are social costs, for both are equated to normal value. In one instance, however, we are dealing with cost and normal value in a stationary society, and in the other with cost and normal value in a progressing society. In other words our concept of cost must vary with the *supply* of capital and labor that is assumed. If we desire to maintain the existing conditions, cost would include only the wear and tear of the existing supply of capital and labor. If, however, we have a progressing society in mind and so imply an ever-increasing supply of capital and labor, then the abstinence incident to the maintaining of this increasing supply is as essential a part of our cost as the wear

and tear of the original supply. From this it follows that the interest on capital and the gain of labor are surpluses if we have in mind the maintaining of existing conditions. On the other hand, they are part of our costs if we have in mind an increasing supply of capital and labor or a progressing society.

160. The Modification of Patten's Diagram.—The diagram referred to is Fig. 5, page 58 of the present volume. The suggested change is shown in Fig. 11, in which the interest on capital and the

FIG. 11.



gain of labor are shown as a part of the cost in a progressing society and as surpluses in a non-progressing society. In the latter case they are included, as is here shown under normal surpluses.

161. The Normal Value Theory only applies to Normal Conditions in a Progressing Society.—The preceding diagram will serve to bring out very clearly the scope and limitations of the theory of

wages here proposed. In the first place, and as its name implies, it is a theory of normal wages. Again, it is only applicable to normal wages in a progressing society, for in a stationary society the normal surpluses, interest on capital and gain of labor, would disappear. If it is urged that the theory gives but a partial solution of the wages problem; that it in no way accounts for *market* wages, we must admit its deficiency. *On the other hand, it might be urged that market wages like all scarcity prices are incapable of exact determination or of reduction under anything like an exact law.* (See Sections 121, to 123.) Normal wages are, however, capable of exact determination, and in a progressing society they include a gain which is equated to an abstinence on the part of the laborer.

A theory which seeks to account for a surplus in wages above the cost of maintaining the laborer is likely to meet with serious opposition. Many of us still hold to that conception of society which obtained in the beginning of the century. We fail fully to realize that in a progressing society both capital and labor must secure a surplus above the cost of maintenance. We see this surplus quite clearly in the case of capital, because it is frequently the object of a separate payment. In the case of wages the surplus is not thus rendered manifest, the payment being in the form of the total amount and not of the surplus alone. And yet, if there is anything in the contention that there is a necessary re-

lation between capital and labor as mobile, homogeneous funds, it follows that if interest is a necessary condition of progress, then the gain of labor is likewise a necessary condition of such progress.

162. Failure to secure this Gain due to Loss of Mobility.—Finally, it may be urged that even in a progressing society there are many who do not secure any such surplus or gain of labor. We are here dealing with a question of fact, and must perforce admit that it is too often true. This, however, does not tell against the contention that in every progressing society normal wages must contain a surplus. For the surplus that we here have in mind is included in the earnings of labor as a *mobile* fund. If you interfere in any way with the mobility of this fund, you manifestly change the conditions of the problem, whether it is capital or labor that you have in mind. For instance, when power-looms superseded the old hand-loom much distress was undoubtedly occasioned. Certain portions of the mobile fund of labor had become fixed in the concrete form of hand-loom weavers, and the distress was in large measure due to the fact that these men had lost their mobility and could not readily adapt themselves to the new conditions. This, however, was just as true of the capital invested in the old hand-loom as it was of the weaver. Yet no one would argue from this that capital does not yield a surplus.

RÉSUMÉ.

I. VALUE.

163. The Cost Theory and its Failure. — The present volume has been written to little purpose if it has not made clear how intimate is the relation between the problem of value and the problem of distribution. It was this, indeed, that compelled me to preface the discussion of distribution with a review of the literature on the theory of value. In Chapter II. it was seen that the marginal cost theory of value failed because scarcity values are not the exception, but the rule. The prevalence of these scarcity goods means that among general commodities the price frequently contains a surplus, even for the marginal producer. From this it follows that even marginal cost must fail as the ultimate standard of price.

164. The Utility Theory and its Failure.—In Chapter IV. it was shown that the marginal utility theory fails for a like reason,—to wit, that the price frequently contains a surplus for the marginal consumer. Or, *just as the Marginal Cost Theory rests in last resort upon the assumption of ideal free competition among producers, so too the Marginal Utility Theory rests upon a like unwarranted assumption of ideal*

free competition among consumers. Any failure in this ideal condition will result in a marginal consumers' surplus, and in all such cases the Marginal Utility Theory fails as the ultimate standard of price.

165. Price determined between Limits.—In Chapter V. the monopoly theory of price was discussed. It was there urged that the marginal utility of the good to the consumer and its marginal utility to the producer only set the upper and lower limits within which the price may vary. It was also maintained that the point between these limits at which the price is actually fixed is more or less indeterminate, since it depends upon the relative monopoly strength of buyer and seller. From this it was concluded that the phenomena of price cannot be reduced under any exact law.

166. Cost and Price.—In Chapter VI. it was shown that in the case of freely reproducible goods price is directly and exactly measured by the marginal cost of production. Again, it was shown that while scarcity prices are not directly and exactly measured by cost, yet some concept of cost does enter into our determination of the price of such goods. Of course, it is not the cost of the scarcity good, but it is the cost of the next best substitute that enters into this determination; for there is no good so rare or so valuable that some less efficient substitute cannot be found to replace it.

II. DISTRIBUTION.

In the development of the theory of distribution, herein proposed, three forms of surplus have been recognized:

RENT, OR THE DIFFERENTIAL SURPLUS that does not enter into the determination of price.

PROFIT, OR THE MARGINAL SURPLUS that does enter into the determination of price.

INTEREST ON CAPITAL AND GAIN OF LABOR, OR THE NORMAL SURPLUSES which enter into the determination of price and into the social cost of production in a *progressing* society.

It may be well to review in a rapid way the argument by which this scheme of distribution was developed.

167. **Rent.**—In the review of the history of the doctrine of rent, it was seen that it was first developed in connection with the old Corn Law agitation. It was practically the defence set up by the agrarian interest against the charge that high rents compelled the payment of high wages, and so interfered with the manufacturing interest of England. As a result of this, the doctrine of rent was, in English economics, largely confined to the earnings of land. In Germany, however, where the manufacturing interests were much slower in their development, this phase of the agrarian problem had not yet arisen; hence we find that German economists did not so persistently restrict the doctrine of rent

to the earnings of land. As early as 1807, Hufeland recognized that rent is a differential or price-determined surplus, and that it is common to all the factors of production. It has seemed wise, therefore, to follow the German economists, and to say that *every price-determined surplus is the rent of the corresponding factor of production.*

168. **Profit.**—In this part of the discussion attention was called to the fact that in many instances the marginal producer secures a surplus; that this surplus enters into the determination of price, and so is in direct antithesis to rent or the price-determined surplus. To *this marginal or price-determining surplus, whether secured by merchant, manufacturer, farmer, or landlord, the name profit has been given.* It is distinguished from rent, as above set forth, and from interest, by the fact that it is a marginal or *monopoly* surplus, while interest is a *normal* surplus.

In reviewing this part of the literature, it was seen that there has been much confusion in the use of the term profit. Sometimes it is applied to the interest on capital; at other times to the wages of the entrepreneur; while, not unfrequently, the terms profit and interest are employed interchangeably. This confused use of the term profit is partly due to the fact that the earlier economists assumed that the prevailing economic conditions are those of free competition. Under such circumstances the marginal or monopoly surplus, to which I have restricted the term profit, would not appear.

The first to break with this earlier practice in regard to the term profit was Walker, who restricted it to that part of the entrepreneur's return which is a differential surplus and so follows the law of rent. It might, however, be urged that if this surplus follows the law of rent it would be much better to follow the German practice and call it the rent of the entrepreneur. We are thus enabled to restrict the term profit to the marginal or price-determining surplus. This, as was shown, is in entire agreement with the use of the term profit by the earlier economists; for, no matter how confused they may have been on other points, they were clear that profit is a surplus that enters into the determination of price. From this it follows that the term should not be applied to a surplus which confessedly does not enter into this determination.

169. **Interest.**—In the discussion of this share of the social product we first reviewed the various theories of interest, including the Exploitation, the Use, the Productivity, the Abstinence, the Marginal Productivity, and the Exchange Theory. The element of truth, as well as the defects of the several theories, was pointed out. The Exchange Theory was examined with considerable care, and it was found that, while its author expressly repudiated abstinence as a factor in the problem, yet as a matter of fact he includes in his theory of interest all three of the essential elements,—time, productivity, and abstinence. His formal ignoring of the part played by

abstinence was seen to be due to his failure to recognize the fact that interest is a problem in normal value. In the development of this part of the argument we drew very freely upon Clark's discussion of the two concepts of capital,—one as a sum of concrete intermediate products; the other as an abstract, mobile, homogeneous fund. It was also seen that interest *per se* is the earning of this mobile fund, and that it is determined by the marginal productivity of this fund or by its product in the least productive industry in which its employment is economically permissible. *Again, as interest is the earning of a mobile homogeneous fund, its determination is clearly a problem of normal value.* If this is true, then we can no longer content ourselves with the statement that the rate of interest is determined by the marginal productivity of capital. The question necessarily arises, What determines this margin or the supply of capital? To this there is the manifest answer that it depends upon the abstinence or disutility endured by the marginal saver, for it is this abstinence that determines the increase of the supply of capital. This, however, conflicts in no way with Böhm-Bawerk's contention that interest is the difference in value between present and future goods. Instead, it confirms that contention in the strongest possible way. To the exchange theory as thus amended we gave the name The Normal Value Theory of Interest.

170. **Wages.**—In the review of the literature of

this part of our subject the various theories of wages were examined. This included the Wages Fund Doctrine, the Residual Claimant Theory, the Productivity Theory, the Marginal Productivity Theory, and the Malthusian Theory. In the discussion of the Marginal Productivity Theory, it was learned that Clark had followed Marx and developed concepts of labor that are identical with Clark's two concepts of capital. In other words, we can think of labor either in the concrete form of weavers and spinners, or as a mobile, homogeneous fund capable of taking any shape the entrepreneur may desire. It was also shown that the rate of wages, like the rate of interest, is determined by the marginal productivity of this abstract, mobile, homogeneous fund, or by its product in the least productive industry in which it will find employment if it retains its freedom of motion.

Again, it was urged that in dealing with labor as a mobile, homogeneous fund we are dealing with normal value. If this is true, it follows that we cannot content ourselves with the statement that the rate of wages is set by the marginal productivity of the mobile fund of labor. For the questions arise, What fixes this margin? What determines the supply of labor? Here, again, the answer was found to be that in a progressing society the supply of labor is limited by the disutility, or abstinence, endured by the marginal laborer who abstains from the enjoyment of free and other goods that he may continue the hours of his

labor. As interest is a surplus above the cost of maintaining the existing supply of capital, so, too, there is a like surplus in wages, or a gain of labor, which is in excess of the cost of maintaining the existing supply of labor.

In the discussion of the Malthusian theory we found a recognition of such a surplus in wages as early as the fifth edition of the "Essay on Population." It is there clearly recognized that the existence of such a surplus is a primary condition of social progress. All this led the present writer to propose what he has styled the Normal Value Theory of Wages,—a theory that corresponds in all essential details to the Normal Value Theory of Interest. It was also shown that as the latter theory involved an exchange of present for future goods, so, too, the Normal Value Theory of Wages involved a like exchange of present for future goods. In other words, they might both be called either exchange theories or normal value theories of interest and wages.

171. **Factors of Production versus Different Forms of Surplus.**—It has been seen that the orthodox economists, so far as they gave any thought to the problem of distribution, threw the accent upon the several factors of production,—land, labor, capital, and entrepreneur. For certain purposes it will still be well to retain this subdivision. It must, however, be remembered that there is another and much more important subdivision,—rent, profit, in-

terest on capital, and gain of labor. The first subdivision is more objective, and so was the first to be recognized. The second, though more important, does not lie so much on the surface of the phenomena of distribution. The relation between these subdivisions is best shown in the following tabulation:

Factors of Production.	The Three Forms of Surplus.		
	Differential.	Marginal.	Normal.
Land*	Rent.	Profit.	
Entrepreneur . . .	Rent.	Profit.	
Capital	Rent.	Profit.	Interest.
Labor	Rent.	Profit.	Gain.

It is here seen that rent and profit are surpluses that may be secured by all four factors of production, while interest and gain of labor can only be secured by those factors that are freely reproducible.

Again, it should be noted that interest and gain are surpluses if we have in mind the maintenance of existing conditions. They, however, become a part of costs if we have in mind a progressing society. It is therefore conceivable that profits might disappear and rents be confiscated and yet society continue to progress. But it is seriously to be questioned whether society can long continue to progress

* Land here includes all natural forces except labor.

if either interest or gain is eliminated. Here, then, we have that ideal of society which socialist writers have endeavored to define. The defective analysis of the orthodox economists has, however, led them astray. In common with these economists, the socialists failed to see that one portion of the earnings of capital, like the earnings of labor, is determined under conditions of free competition. It must be admitted, however, that while progress depends in last resort upon the realization of the interest on capital and the gain of labor, yet, as a matter of fact, progress has in the past been largely dependent upon the stimulus of rents and profits. On the other hand, it may well be true that society has not only paid more in rents and profits than was necessary to secure the desired progress, but that these overdrafts have materially retarded that progress. For after all, the only social justification that can be urged for rents and profits is that they tend to resolve themselves into interest and gain through an advancing standard of life.

It may be objected that we here employ the terms rent, profit, interest, and gain in an entirely different sense from that sanctioned by common usage, and that it would have been better to make use of entirely new terms. In reply, I would plead the precedent established by the earlier economists in their development of the doctrine of rent. They saw, of course, that the total payment to the landlord is a complex return which includes not only a payment

for the land, but as well a payment for the money invested in permanent improvements. Having shown that the first was determined by a more or less definite law, they restricted the term rent to this share of the total payment. It is this method of procedure that has been followed in the present study. Having clearly distinguished three, or, if you like, four, forms of surplus, we have availed ourselves of the familiar terms rent, profit, interest, and gain by giving them a more restricted meaning than that which prevails in common practice. But if the employment of these or any equally short terms tends to obscure the important differences that exist between these several surpluses, then let us abandon them and return to the more cumbersome terms, the price-determined surplus, the monopoly price-determining surplus, and the normal price-determining surpluses of capital and labor. After all, it is far less important what terms are employed than that we should clearly distinguish these several surpluses in our study of distribution. When, for instance, J. S. Mill tells us that rent does not enter into the determination of price except in the case of scarcity goods, we must have our several surpluses so well in hand that we clearly recognize that there is here a confusion in thought, due to the including of two forms of surplus, the price-determined and the price-determining, or rent and profit under a common term,—rent.

Again, when Wieser urges that interest is not a condition of progress because interest is high in non-

progressing countries like China, it is manifest that he has confounded a monopoly surplus with a normal surplus or profit with interest by including both under a common term,—interest. It is, as I have already said, far less important that we should retain the familiar terms rent, profit, interest, and gain than that we should avoid the confusion which results from the confounding of these essentially different forms of surplus.

172. An Essentially Different Scheme of Distribution from that proposed by Clark.—In conclusion, it may be well to note that the scheme of distribution which is here proposed differs fundamentally from that proposed by J. B. Clark. He writes:

"The true method of obtaining a law of distribution is not, therefore, to eliminate from the earnings of society the element of ground-rent and then try to find a principle that will account for the remaining elements; it is to eliminate what is not rent—namely, pure profit—by reducing society to a static condition and then by the use of the rent-law to account for all that remains." * In keeping with this he writes: "Interest is the rent of the social fund of pure capital. It is a differential gain in the fullest sense of the term. It is measured by the Ricardian formula, and will bear all the tests to which a rent producer can be subjected." †

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* Quarterly Journal of Economics, 1891, page 291.

† Ibid., page 303.

As the latest statement of Clark's views upon this point are nearly a decade old, and as the first volume of his completed book will shortly appear, it is hardly in order to attempt any review of this part of his work at the present time. It is manifest, however, that he here divides the entire social surplus into rent and profit. I, on the other hand, have recognized three forms of surplus,—the differential, the marginal, and the normal; or rent, profit, and, under the normal surplus, interest on capital and gain of labor. The source of our disagreement is found, I think, in the two competing differential concepts, one confined to the single industry and the other including the whole range of industry. For reasons given in sections 62, 66, and 67, I have fixed upon the first, while Clark has taken the second as the concept having the greatest economic importance. If Clark has not modified his views upon this point, it will be in order for the reader to pass upon the two schemes of distribution when his work appears.

THE END.

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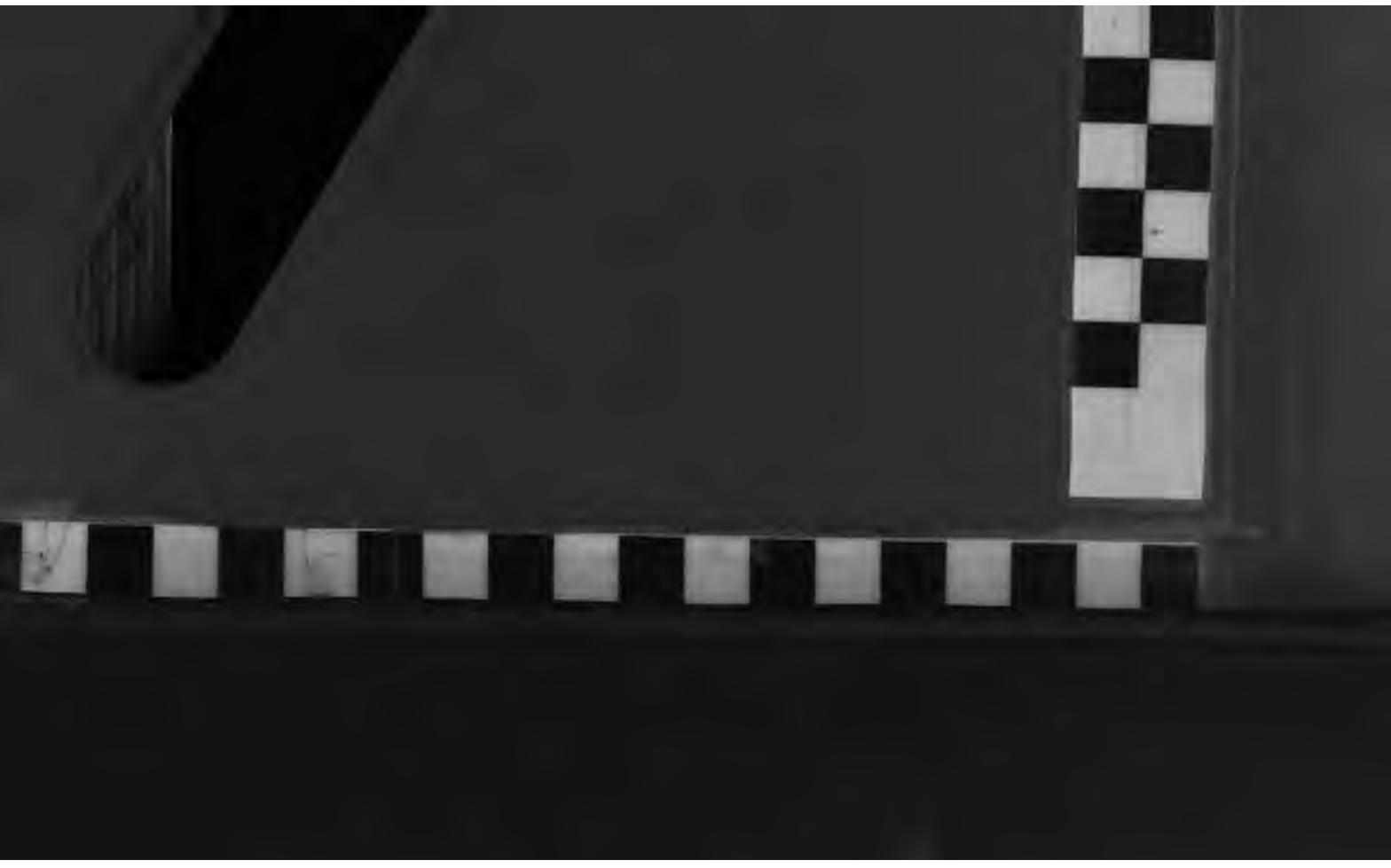
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